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Central Bank Independence in Another Eleven Countries *

SYLVESTER EIJFFINGER and MARTIJN VAN KEULEN

1. Introduction

In recent years, there has been a growing interest in the independence of central banks. This can be explained by the institution of the European Central Bank in the context of the European Economic and Monetary Union, especially after the Treaty of Maastricht in December 1991.

The rationale for the independence of central banks is the so-called Rules versus Discretion debate. This is in favour of monetary policy rules since governments are thought to manipulate policy instruments in a discretionary way to stimulate economic growth and employment in the short run. To prevent governments from doing so, this view argues for explicit monetary legislation in order to make central banks independent of governments, and/or for fixed monetary policy rules. A central bank can only fight inflation in the long run if it is not influenced by directives of the government. A credible and steady declared monetary policy generates a better pay-off in terms of inflation and unemployment than a discretionary policy, when macroeconomic outcomes are dependent on the expectations with regard to future monetary policy.

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On the basis of this debate, one would expect that countries with independent central banks would also have lower levels of inflation.

In the literature, several authors have written about the institution of an independent central bank. Bade and Parkin (1988), Alesina (1988, 1989), Grilli, Masciandaro and Tabellini (1991), Cukierman (1992) and Eijffinger and Schaling (1992, 1993) constructed indices to compare the degree of independence of central banks in various countries. Of course, the limits of the index approach are quite evident: e.g. the Czech central bank is found to be legally very independent but not necessarily independent in practice. Actual independence implies not only legal independence but also a tradition and culture of monetary stability.

Alesina and Summers (1993), de Haan and Sturm (1992), Cukierman (1992) and Eijffinger and Schaling (1993, 1995) also examined the empirical relationship between the degree of central bank independence and (the variability of) inflation and economic growth.

In this study, the respective indices of Bade and Parkin, Alesina, Grilli, Masciandaro and Tabellini and Eijffinger and Schaling are put together and applied to a group of eleven countries (Austria, Denmark, Finland, Hungary, Luxembourg, New Zealand, Norway, Poland, Portugal, Spain and the Czech Republic). However, the legal indices for central bank independence of Cukierman are not included because of a lack of sufficiently detailed information on most countries, especially regarding the limitations on lending. Then, we investigate the empirical relationship between independence and inflation.

This study is made up as follows. In Section 2 the indices of central bank independence are described and applied to the group of eleven countries. The results for every index are compared with the inflation rates and differences between the indices are explained. Section 3 contains an empirical study of significant relationships, first, between average inflation and central bank independence and, second, between inflation variability and central bank independence.

2. Four indices of central bank independence

2.1. *The Bade and Parkin index (1988)*¹

In their study, Bade and Parkin (BP) investigate the cross-country relationships between monetary policy and central bank legislation. They describe the central bank law on the basis of three characteristics:

- (i) the relationship between central banks and governments with respect to the formulation of monetary policy;
- (ii) the procedures for appointment and dismissal from office of the directors of central banks;
- (iii) the financial and budgetary relationships between central banks and governments.

Features (i) and (ii) are used by BP to classify the central banks according to their degree of policy independence; feature (iii) is used for the classification of their degree of financial independence. In this study we do not include (iii) since it is less comparable with the features used in the other indices. The BP degree of policy independence is defined by three criteria:

- (1) Is the central bank the final monetary policy authority?
- (2) Is a government official on the bank board?
- (3) Are some board appointments outside government control?

After having studied the central bank laws of the eleven countries it can be concluded that the central banks of Luxembourg (–1994), New Zealand, Norway, Poland, Portugal and Spain (1994) are dependent on their respective governments with respect to monetary policy. Those of Austria, Denmark, Finland, Hungary, Luxembourg (+1994), Spain (+1994) and the Czech Republic are independent. However, legal independence does not necessarily imply actual independence. These results are summarized in Table 1, showing whether a central bank is independent on the basis of the articles of the respective central bank laws.

¹ Bade and Parkin 1988.

TABLE 1

CENTRAL BANK LAWS: MONETARY POLICY

Country	Central bank law	Article(s)	Final authority
Austria	National Bank Act 1984	4	b
Denmark	National Bank of Denmark Act 1936	1, 25 (by-laws)	b
Finland	Regulations for the Bank of Finland 1925	2, 16, 17	b
Hungary	Act LX of 1991 on the National Bank of Hungary	6	b
Luxembourg	Loi du 20 mai 1983 portant création d'un Institut Monétaire Luxembourgeois	12(3), 28	g
	Loi relative à l'Institut Monétaire Luxembourgeois du 22 octobre 1993	2	b
New Zealand	Reserve Bank of New Zealand Act 1989	8	g
Norway	Act of 24 May 1985 relating to Norges Bank and the Monetary System	2	g
Poland	Act on Narodowy Bank Polski 1989	6.2.2	g ¹
Portugal	Organic Law 1990	3	g
Spain	Law 30, 'Regulan los órganos rectores del Banco de España', 21 June 1980	3	g
	Law of 1 February 1993, 'Proyecto de Ley Autonomia del Banco de España'	2	b
Czech Republic	Act on the Czech National Bank of 17 December 1992	5.1	b

b = bank; g = government

¹ The Polish Parliament has monetary policy authority.

Table 2 gives information about the number of government officials on the bank board and the proportion of board members appointed by the government.

TABLE 2

CENTRAL BANK LAWS: APPOINTMENTS OF BANK BOARDS

Country	Central bank law	Article	Government officials on policy board ^a	Proportion of policy board appointed by government ^b
Austria	National Bank Act 1984	22-25, 45	1	8/14
Denmark	National Bank Act 1936	8 (by-law)	0	1/3
Finland	Parliament Act 1919	83	0	1
Hungary	Act LX of 1991 on the NBH	57	1	1
Luxembourg	Loi du 20 mai 1983 Loi du 22 octobre 1993	12 12	0 0	1
New Zealand	Reserve Bank Act 1989	40	0	1
Norway	Act of 24 May 1985	5, 6	0	1
Poland	Act on NBP 1989	49, 51	0	< 1/2
Portugal	Organic Law 1990	38	0	1
Spain	Law 30 of 21 June 1980 Law of 1 February 1993	5, 8, 10 13, 14, 15	2 1	8/15 6/8
Czech Republic	Act of 17 December 1992	6	0	0

^a Number of Ministers (or their representatives) who have a place in the policy board.

^b Proportion of members appointed directly or indirectly by government or parliament.

The results of Table 1 and Table 2 can now be used to construct the BP index of policy independence. Each of the criteria may or may not appear, so eight possible policy types can be distinguished, as summarized in Table 3.

TABLE 3

CENTRAL BANK LAWS: POLICY TYPES

Bank is final policy authority	No government official on bank board	Some board appointments independent of government	Potential central bank type	Central bank type does exist	Policy type
1	2	3			
—	—	*	(a)	no	—
*	—	*	(b)	no	—
—	—	—	(c)	yes	1
—	*	—	(d)	yes	2
—	*	*	(e)	yes	3
*	—	—	(f)	yes	4
*	*	*	(g)	yes	5
*	*	*	(h)	yes	6

In column 3 appointments are independent of the government if less than half of the policy board members is appointed by government or parliament.

By applying the three criteria for policy independence to every country, it can be shown that policy types (a) and (b) do not exist: only types (c)-(h) in Table 3 matter for the BP index of policy independence. BP find the overall degree of policy independence by a simple equally weighted average of the criteria. In other words, the six remaining central bank types are ranked from 1 (least independent) to 4 (most independent) on the basis of the number of asterisks in Table 3. The BP ranking for the eleven central banks is shown in the “policy type” column of Table 4.

Next, Bade and Parkin focus on the relationship between central bank laws and monetary policy, looking at two features of monetary policy: the level of inflation as measured by the change in consumer prices (CPI) and the variability of policy as measured by the dispersion (standard deviation) of the inflation level. The results are given in Table 4.

TABLE 4

BADE-PARKIN: AVERAGE INFLATION AND ITS VARIABILITY GROUPED
ACCORDING TO CENTRAL BANK POLICY TYPE, 1969-1992¹

Country	Inflation			Policy variability	
	Policy type	Percent	Rank	Standard deviation	Rank
Spain (–1994) ^a	1	8.8	(7)	3.5	(7)
Austria ^{ob}	2	3.0	(1)	1.3	(1)
Hungary ^{oc}		18.5	(9)	–	–
Luxembourg (–1994) ^d		3.4	(3)	2.6	(4)
New Zealand ^e		3.2	(2)	2.6	(5)
Norway ^f		5.3	(4)	2.3	(3)
Portugal ^g		10.2	(8)	1.8	(2)
Spain (+1994) ^o		–	–	–	–
Finland ^o	3	7.7	(6)	4.1	(8)
Luxembourg (+1994) ^o		–	–	–	–
Poland ^h		237.6	(11)	249.9	(10)
Denmark	4	7.0	(5)	3.3	(6)
Czech Republic ⁱ		26.2	(10)	27.3	(9)

Countries marked ° have policy independent central banks.

^a 1981-1992; ^b 1984-1992; ^c only data available for 1992; ^d 1983-1992; ^e 1989-1992; ^f 1986-1992; ^g 1991-1992;

^h 1989-1992; ⁱ 1990-1992.

¹ Consumer prices, on an annual basis, *IMF International Financial Statistics Yearbook*, 1993, pp. 104-107.

In Table 4 sample periods of longer than 30 years are used only for Denmark and Finland. The other countries have had new central bank laws in the period 1963-1992 so adjusted sample periods have been used. On the basis of Table 4 no association can be discerned between policy independence and the two features of monetary policy, inflation level and variability, regarding the BP index.

It should be noted that most of the central bank laws in this study are relatively recent and, therefore, cannot be examined empirically. If only the central bank laws which have been in force more than five years are examined, the results do not change. Also for this group of countries (Spain (–1994), Austria, Luxembourg (–1994), Norway, Finland and Denmark) no relationship can be found between policy independence and inflation level or variability.

2.2. *The Alesina index (1988, 1989)*²

Alesina includes macroeconomic relationships such as monetary financing rules, thus enlarging the BP index of policy independence with a fourth criterion:

- (4) Is the central bank obliged to buy short-term Treasury paper?

Alesina uses (4) because he sees this criterion as an additional measure of the independence of central banks, since a monetary financing obligation can seriously harm the independent position of a central bank with respect to monetary policy making.

Table 5 shows that, according to this criterion, only the central banks of Denmark, Portugal, Poland, Hungary, Spain (+1994) and Luxembourg (+1994) have no obligation to finance their respective governments.

TABLE 5

ALESINA: IS THE CENTRAL BANK REQUIRED TO
ABSORB EXCESS SUPPLY OF SHORT-TERM TREASURY BILLS?

BP policy type	No ^a	Yes
1		Spain (-1994)
2	Portugal, ^b Spain (+1994), Hungary	Austria, Luxembourg (-1994), New Zealand, Norway
3	Poland, Luxembourg (+1994)	Finland
4	Denmark ^c	Czech Republic

^a i.e. a central bank cannot be forced by government or parliament to buy short-term Treasury paper.

^b After the coming into force of the second stage of the EMU on January 1, 1994, monetary financing is no longer allowed in EU member states.

^c Denmark will not participate in the third stage of the EMU; with respect to the second stage it holds that "All of these prohibitions against monetary financing are already in accordance with existing practice in Denmark". See Danmarks Nationalbank, *Annual Report 1992*, pp. 20-22.

According to the Alesina index for policy independence, there are seven different types of central banks in the group of eleven countries. The independence classification of these types in comparison with Bade Parkin is shown in Table 6.

² Alesina 1988, pp. 13-52 and 1989, pp. 55-98.

TABLE 6

ALESINA TYPES AND CENTRAL BANK INDEPENDENCE

BP policy type	Criterion (4) met? ^a	Potential central bank type ^b	Does central bank type exist?	Alesina type exist?
1	*	(a)	no	–
1	–	(b)	yes	0/1
2	–	(c)	yes	1/2
2	*	(d)	yes	2
3	–	(e)	yes	2/3
3	*	(f)	yes	3
4	–	(g)	yes	3/4
4	–	(h)	yes	4

Notes: ^a see Table 4.^b see Table 5.

Taking a central bank that is not obliged to finance its respective government as being more independent than one which does, we determine the independence classification of central banks according to the Alesina index of policy independence. Table 7 gives every Alesina-type country with its corresponding level and variability of inflation.

TABLE 7

AVERAGE INFLATION AND ITS VARIANCE,
ACCORDING TO ALESINA CENTRAL BANK POLICY TYPE, 1963-1992

Country	Inflation rate			Policy variability	
	Policy type	Percent	Rank	Standard deviation	Rank
Spain (–1994)	0.5	8.8	(7)	3.5	(7)
Austria	1.5	3.0	(1)	1.3	(1)
Luxembourg (–1994)		3.4	(3)	2.6	(4)
New Zealand		3.2	(2)	2.6	(5)
Norway		5.3	(4)	2.3	(3)
Hungary	2	18.5	(9)	–	–
Portugal		10.2	(8)	1.8	(2)
Spain (+1994)		–	–	–	–
Finland	2.5	7.7	(6)	4.1	(8)
Luxembourg (+1994)	3	–	–	–	–
Poland		237.6	(11)	249.9	(10)
Czech Republic	3.5	26.2	(10)	27.3	(9)
Denmark	4	7.0	(5)	3.3	(6)

On the basis of the Alesina index, no association can be discerned between average inflation and the degree of central bank independence for the countries in Table 7. This result also applies to the relationship between central bank independence and inflation variability.

If we only look at the countries with a central bank law which is more than five years old (Spain (–1994), Luxembourg (–1994), Austria, Norway, Finland and Denmark), the same conclusions can be drawn.

2.3. *The Grilli, Masciandaro and Tabellini index (1991)*³

Grilli, Masciandaro and Tabellini (GMT) published a study on the independence of central banks and the indices used to measure this independence, in which they distinguish two forms of independence: political and economic.⁴ Because the index of political independence corresponds best with the other three indices used in this study, only this will be treated in this subsection.

GMT define political independence as the capacity (of a central bank) to choose the final goal of monetary policy, such as the inflation level or the level of economic activity. According to GMT, this capacity depends on three features:

- (i) appointment procedures for the members of the policy body of a central bank;
- (ii) the relationship between this body and the government;⁵
- (iii) the formal responsibilities of a central bank.

these features are then used to construct their index of policy independence. To measure the level of independence, GMT use eight criteria:

- (1) Is the governor appointed by parliament?
- (2) Is he appointed for more than five years?

³ Grilli, Masciandaro and Tabellini 1991, pp. 366-375.

⁴ GMT define economic independence as the capacity of a central bank to choose instruments with which to pursue goals of monetary policy.

⁵ In the GMT study, government signifies just that, whereas in the BP paper it also includes parliament.

(3) Is the whole policy board appointed by the government?
(Compare with BP (3): Are some board appointments made independently of the government?)

(4) Is the term for the policy board members longer than five years?

(5) Is there a mandatory participation of a government representative in the board?

(Compare with BP (2): Is there a government official on the bank board?)

(6) Is government approval of monetary policy required?
(Compare with BP (1): Is the central bank the final monetary policy authority?)

(7) Are there legal obligations on the central bank to pursue monetary stability among other objectives?

(8) Are there legal provisions that strengthen the bank's position in case of conflict with the government?

GMT measure the degree of independence of a central bank by simply adding up the eight (equally weighted) criteria. This is shown in Table 8, column 9, where the total number of asterisks determines the level of independence of each of the eleven countries. On this basis we conclude that the Czech Republic has the most independent central bank. However, it is questionable to what degree this legal independence also implies actual independence.

In Table 9 the GMT policy types are compared with inflation levels and inflation variability. The same inflation data and sample periods are used as for BP and Alesina. Again, no clear association can be discerned between central bank independence and inflation performance. The results also hold for the countries with a central bank statute that has been in force for more than five years.

TABLE 8

GRILLI-MASCIANDARO-TABELLINI:
MONETARY POLICY INDEPENDENCE OF CENTRAL BANKS

Countries	Appointments				Relationship with government		Statute		Index of political independence
	1	2	3	4	5	6	7	8	9
Austria	-	-	-	-	-	*	*	*	3
Denmark	-	*	-	*	*	*	*	-	5
Finland	-	-	*	-	*	*	*	-	4
Hungary	-	*	-	-	-	*	*	-	3
Luxembourg (-1994)	-	*	-	*	*	-	*	-	4
Luxembourg (+1994)	-	*	-	*	*	*	*	-	5
New Zealand	-	-	-	-	*	-	*	-	2
Norway	-	*	-	-	*	-	*	-	2
Poland	-	*	-	1	*	-	*	-	3
Portugal	-	-	-	-	*	-	*	-	2
Spain (-1994)	-	-	-	-	-	-	-	-	0
Spain (+1994)	-	*	-	*	-	*	*	*	5
Czech Republic	*	*	*	*	*	*	*	-	7

¹ Not to be deduced from the Polish central bank law.

TABLE 9

GRILLI-MASCIANDARO-TABELLINI:
AVERAGE INFLATION AND ITS VARIABILITY GROUPED
ACCORDING TO CENTRAL BANK POLICY TYPE, 1963-1992

Country	Inflation rate			Policy variability	
	Policy type	Percent	Rank	Standard deviation	Rank
Spain (-1994)	1	8.8	(7)	3.5	(7)
New Zealand	2	3.2	(2)	2.6	(5)
Norway		5.3	(4)	2.3	(3)
Portugal		10.2	(8)	1.8	(2)
Hungary	3	18.5	(9)	-	-
Austria		3.0	(1)	1.3	(1)
Poland		237.6	(11)	249.9	(10)
Finland	4	7.7	(6)	4.1	(8)
Denmark	5	7.0	(5)	3.3	(6)
Luxembourg (+1994)		-	-	-	-
Spain (+1994)		-	-	-	-
Czech Republic	6	26.2	(10)	27.3	(9)

2.4. *The Eijffinger and Schaling index (1992, 1993)*⁶

Eijffinger and Schaling (ES) describe policy independence, like GMT, as the capacity of central banks to choose the final goals of monetary policy, determined by:

- (i) formal responsibility of central banks with regard to monetary policy;
- (ii) the relationship between the central bank and government/parliament in the formulation of monetary policy;
- (iii) the procedures for the appointment of the board of a central bank.

On the grounds of these features, Eijffinger and Schaling construct their (asymmetrical) index for policy independence. The level of such independence depends on three criteria:

- (1) Is the central bank alone responsible for monetary policy (b), does it share this responsibility (b/g) or does it have no influence on monetary policy (g)?
- (2) Is a government representative appointed (with or without voting power) on the bank board?
- (3) Are more than half the board members appointed independently of the government?⁷

Because criterion (1) has three solutions, there are 3x2x2 possible ES policy types.

Table 10 gives five different ES policy types for the group of eleven countries: classification is determined by summing up the number of asterisks plus one.

When inflation performance is set out against the ES policy types, again no association can be found between inflation level and central bank independence or between inflation variability and central bank independence. If we look at the group of countries with older central bank laws (Spain (–1994), Luxembourg (–1994), Norway, Austria, Finland and Denmark), the same conclusions can be drawn: see Table 11.

⁶ Eijffinger and Schaling 1992, pp. 34-37 and 1993, pp. 64-68.

⁷ In this subsection parliament is included under government.

TABLE 10

EIJFFINGER-SCHALING: POLICY TYPES

Bank is final policy authority	No government official on bank board	Some board appointments independent of government	Potential central bank type	Central bank type does exist	Policy type
1	2	3			
-(g)	-	*	(a)	no	-
*(b/g)	-	*	(b)	no	-
*(b/g)	-	-	(c)	no	-
** (b)	-	*	(d)	no	-
-(g)	-	-	(e)	yes	1
-(g)	*	-	(f)	yes	2
-(g)	*	*	(g)	yes	3
*(b/g)	*	-	(h)	yes	3
*(b/g)	*	*	(i)	yes	4
** (b)	-	-	(j)	yes	3
** (b)	*	-	(k)	yes	4
** (b)	*	*	(l)	yes	5

TABLE 11

EIJFFINGER-SCHALING: AVERAGE INFLATION AND ITS VARIABILITY
GROUPED ACCORDING TO CENTRAL BANK POLICY TYPE, 1963-1992

Country	Inflation rate			Policy variability	
	Policy type	Percent	Rank	Standard deviation	Rank
Spain (-1994)	1	8.8	(7)	3.5	(7)
Luxembourg (-1994)	2	3.4	(3)	2.6	(4)
Norway	2	5.3	(4)	2.3	(3)
Portugal	2	10.2	(8)	1.8	(2)
Hungary	3	18.5	(9)	-	-
Austria	3	3.0	(1)	1.3	(1)
Poland	3	237.6	(11)	249.9	(10)
New Zealand	3	3.2	(2)	2.6	(5)
Finland	3	7.7	(6)	4.1	(8)
Spain (+1994)	3	-	-	-	-
Denmark	4	7.0	(5)	3.3	(6)
Luxembourg (+1994)	4	-	-	-	-
Czech Republic	5	26.2	(10)	27.3	(9)

2.5. *The four indices compared*

2.5.1. *Bade-Parkin versus Alesina*

Differences between both indices can be explained by the simple fact that the Alesina index has one more criterion than the BP index. In this subsection the other two indices will only be compared to the BP index, as those three indices match best. The Alesina index is harder to compare with GMT and ES because of the fourth criterion regarding monetary financing and, therefore, omitted.

2.5.2. *Bade-Parkin versus Grilli-Masciandaro-Tabellini*

To be able to compare GMT with BP we have to focus on GMT criteria (3), (5) and (6). If we aggregate them, the outcome will not be the same as in Table 9. However, only these three criteria are really comparable with BP.

Differences between both indices are caused by interpretation effects and criterion effects. The former arise because of differences in interpretation of central bank laws [GMT (5) and (6) versus BP (1) and (2)]. The latter arise because of differences between criteria [GMT (3) versus BP (3)]. See Table 12 for a decomposition of the differences between both indices into interpretation and criterion effects.

Table 12 shows that there are no interpretation effects between BP and GMT. This can be explained by the fact that the BP criteria (1), (2) and (3) are almost the same as the GMT criteria (3), (5) and (6) and all these criteria are judged in this study on the basis of the same information. Criterion effects exist for Denmark, Finland and Poland. BP classify Denmark and Poland one policy type higher as their criterion (3) is less strict than GMT criterion (3). GMT ask if the entire policy board is appointed by the government, while BP look at what proportion of the policy board is appointed by the government. If less than half of the members are appointed by the government it is sufficient for BP, but not for GMT. The difference for Finland can be explained by the fact that for GMT the political authority is the government alone, while for BP this comprises both government and parliament.

TABLE 12

BADE-PARKIN VS. GRILLI-MASCIANDARO-TABELLINI

Country	GMT policy type ^a	BP policy type ^b	Interpretation ^c	Criterion effect ^d	Difference GMT – BP ^e
Austria	2	2	0	0	0
Denmark	3	4	0	-1	-1
Finland	4	3	0	1	1
Hungary	2	2	0	0	0
Luxembourg (-1994)	2	2	0	0	0
Luxembourg (+1994)	3	3	0	0	0
New Zealand	2	2	0	0	0
Norway	2	2	0	0	0
Poland	2	3	0	-1	-1
Portugal	2	2	0	0	0
Spain (-1994)	1	1	0	0	0
Spain (+1994)	2	2	0	0	0
Czech Republic	4	4	0	0	0

^a (Number of asterisks in columns 3, 5 and 6 of Table 8) + 1.

^b See Table 4.

^c (Number of asterisks in columns 5 and 6 of Table 8 + number of asterisks in column 3 of Table 3) + 1 – BP policy type.

^d (Number of asterisks in columns 1 and 2 of Table 3 + number of asterisks in column 3 of Table 8) + 1 – BP policy type.

^e difference = total difference between GMT and BP; columns (c) and (d).

2.5.3. *Bade-Parkin versus Eijffinger-Schaling*

In comparing BP* with ES, we have to take account of the fact that ES criterion (1) has twice the weight of BP criteria (2) and (3), and thus adjust the BP index for this asymmetry in order to be able to compare the two indices.

After adjustment of the BP index to the ES index, differences between the two indices consist also of interpretation and criterion effects. See Table 13 for a decomposition of these differences.

Interpretation effects occur for Denmark, Finland and New Zealand. Denmark and Finland have a lower ES classification because, in practice, their monetary policy is determined by both the central bank and government. New Zealand goes from BP (g) to ES (b/g) as its government has the final say over monetary policy, although it requires a complicated procedure to override the central bank.

TABLE 13

BADE-PARKIN VS. EIJJFINGER-SCHALING

Country	ES policy type ^a	BP policy type ^b	BP adjusted policy type ^c	Interpre- tation ^d	Criterion effect ^e	Difference GMT – BP ^f
Austria	3	2	3	0	1	1
Denmark	4	4	5	-1	1	0
Finland	3	3	4	-1	1	0
Hungary	3	2	3	0	1	1
Luxembourg (-1994)	2	2	2	0	0	0
Luxembourg (+1994)	4	3	4	0	1	1
New Zealand	3	2	2	1	0	1
Norway	2	2	2	0	0	0
Poland	3	3	3	0	0	0
Portugal	2	2	2	0	0	0
Spain (-1994)	1	1	1	0	0	0
Spain (+1994)	3	2	3	0	1	1
Czech Republic	5	4	5	0	1	1

^a See Table 10.^b See Table 4.^c BP asymmetrical policy types: BP types if BP 1 has two times the weight of BP 2 and 3 (b=**).^d ES – BPA (BP adjusted).^e BPA – BP.^f (d) + (e).

Austria, Denmark, Finland, Hungary, Luxembourg (+1994), Spain (+1994) and the Czech Republic all have a positive criterion effect because BP-adjusted policy types have two asterisks instead of one for the unadjusted type.

2.5.4. *Eijffinger-Schaling versus Grilli-Masciandaro-Tabellini*

For the comparison of the GMT index with the ES index we have to remember that we can only look at GMT criteria (3), (5) and (6) and that the ES index is asymmetrical. Keeping this in mind, interpretation and criterion effects will appear. See Table 14 for a decomposition of both effects.

Austria, Hungary, Luxembourg (+1994), New Zealand, Spain (+1994) and the Czech Republic have positive interpretation effects, explained in Table 13. The positive criterion effects for Denmark and Poland and the negative criterion effect for Finland were explained in Table 12.

TABLE 14

EIJFFINGER-SCHALING VS. GRILLI-MASCIANDARO-TABELLINI

Country	ES policy type ^a	GMT policy type ^b	Interpre- tation ^c	Criterion effect ^d	Difference GMT – BP ^e
Austria	3	2	1	0	1
Denmark	4	3	0	1	1
Finland	3	4	0	-1	-1
Hungary	3	2	1	0	1
Luxembourg (-1994)	2	2	0	0	0
Luxembourg (+1994)	4	3	1	0	1
New Zealand	3	2	1	0	1
Norway	2	2	0	0	0
Poland	3	2	0	1	1
Portugal	2	2	0	0	0
Spain (-1994)	1	1	0	0	0
Spain (+1994)	3	2	1	0	1
Czech Republic	5	4	1	0	1

^a See Table 11.^b See Table 12.^c ES – BP: see column (f) of Table 13.^d BP – GMT: see column (e) of Table 12 (signs must be reversed).^e (c) + (d).

3. Empirical analysis

In this section we check whether a negative empirical relationship can be found between central bank independence and inflation performance. We have used regression analysis (OLS method) with the different indices of central bank independence as explanatory variables of average monthly inflation (CPI) and the variance of monthly inflation. The sample period of the regression analysis is from January 1982 to December 1993. This period was chosen because the start of the stage of consolidation within the EMS was in 1982,⁸ and because most of the countries in this study had new central bank laws at the beginning of the 1980s.

⁸ Ungerer 1990, pp. 329-362.

To investigate the relationship between central bank independence and average monthly inflation, we regressed (OLS method) the following equation:

$$(4.1) \text{ average monthly inflation} = \alpha_0 + \alpha_1^* \text{ central bank independence} + \varepsilon_t$$

In Table 15 the estimations are given for the BP, Alesina, GMT and ES indices for central bank independence. T-values of constant and the coefficient for the different indices are in parentheses. Moreover, we considered the group of countries where the central bank laws are more than five years old (Austria, Denmark, Finland, Luxembourg (–1994), Norway and Spain (–1994)). One should note, however, that all results in this table must be carefully interpreted as the number of degrees of freedom is limited (respectively 9 and 4)

TABLE 15

INFLATION LEVEL AND THE INDICES OF CENTRAL BANK INDEPENDENCE

Explanatory variables	1982-1993	1982-1993 Central bank law in force > five years
Constant	–0.00053 (–0.023)	0.005226 (3.900)
Bade and Parkin (BP)	0.006339 (0.677)	–0.00058 (–1.091)
R ²	0.054232	0.229335
Constant	–0.0005 (–0.029)	0.004768 (4.630)
Alesina	0.007275 (0.940)	–0.00047 (–1.004)
R ²	0.099511	0.201235
Constant	0.018072 (0.879)	0.005834 (5.820)
Grilli-Masciandaro-Tabellini (GMT)	–0.00139 (–0.210)	–0.00062 (–2.128)*
R ²	0.00548	0.531005
Constant	0.002195 (0.087)	0.005879 (4.978)
Eijffinger and Schaling (ES)	0.004561 (0.493)	–0.0008 (–1.817)*
R ²	0.029452	0.452329

t-values are in parentheses. One asterisk indicates that the coefficient is significantly different from zero at a 90% confidence level and two asterisks indicate that the coefficient is significant at a 95% confidence level.

Source: Datastream, monthly consumer prices 1/1982-12/1993. For New Zealand only, quarterly data were available; for Poland, inflation data started in 1/1988.

From the second column of Table 15, it can be concluded that there is no significant negative relationship between central bank independence and average inflation. For BP, Alesina and ES there is even a positive α_1 coefficient, although it is not significant.

This does not correspond with the empirical results found in studies for other countries. de Haan and Sturm (1992), Cukierman (1992), Alesina and Summers (1993) and Eijffinger and Schaling (1995)⁹ all discover a significant negative relationship between average inflation and central bank independence.

The results in the second column correspond with the results in Section 2, where no clear association could be discerned between average inflation and central bank independence.¹⁰

The third column of Table 15 gives the empirical results for the countries with older central bank laws. For this group of countries, the t-values of the α_1 coefficient for GMT and ES are significantly different from zero at a 90% confidence level. Thus, the inverse relationship between central bank independence and level of inflation is not strongly confirmed. The difference between BP/Alesina and GMT/ES can perhaps be explained by the fact that the latter indices are more precise in the determination of central bank independence.

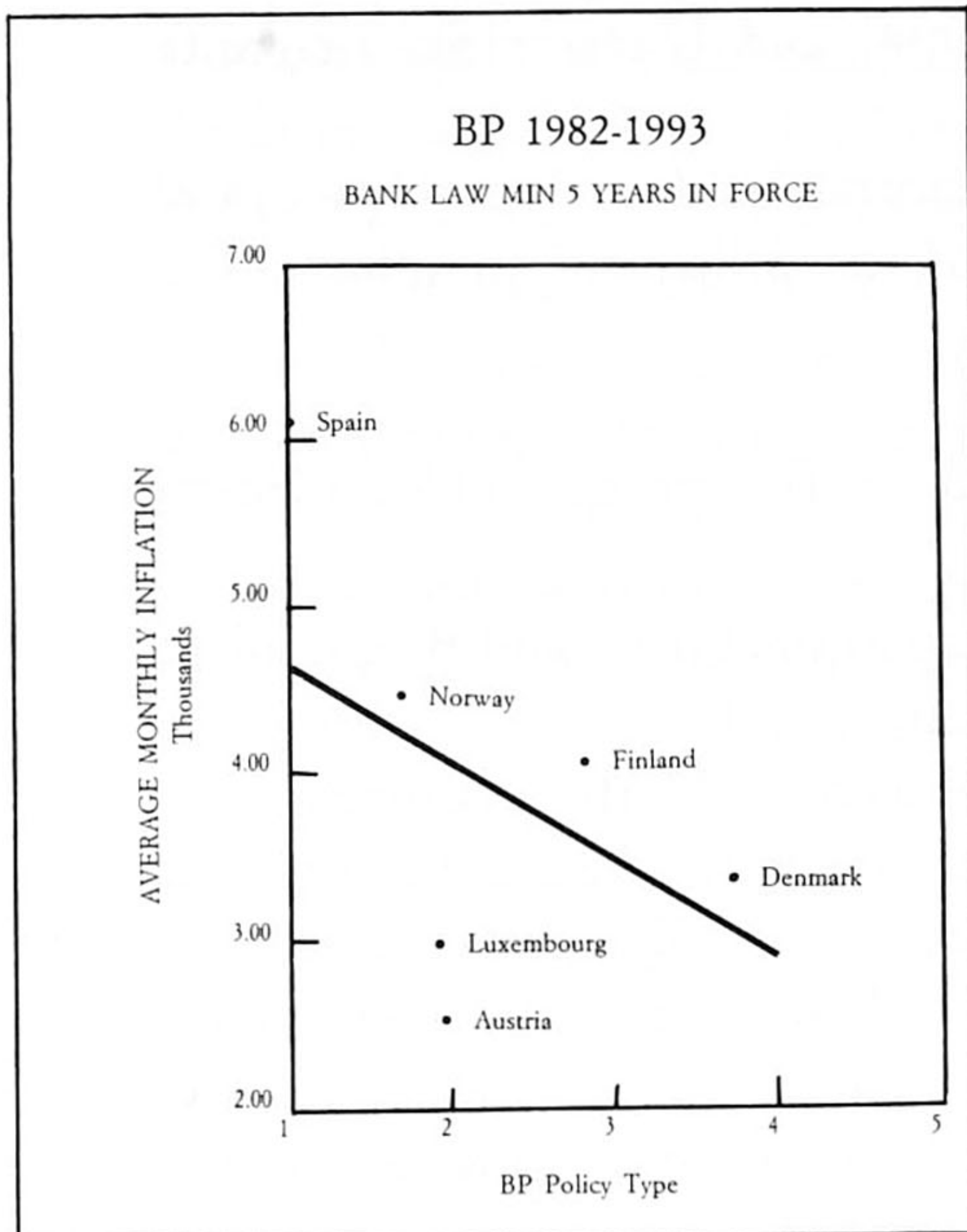
Figures 1-4 show a negative relationship between inflation level and central bank independence for the countries with a central bank law in force for more than five years, despite some positive outliers (Spain for BP, Alesina, GMT and ES; Finland for GMT) and some negative outliers for BP, Alesina and ES (Austria and Luxembourg) and for GMT (Austria).

This cannot be used to explain the difference in significance for this group of six countries and does not correspond to the results in Section 2. However, this can be explained by the fact that in Section 2

⁹ de Haan and Sturm 1992, pp. 305-327; Alesina and Summers 1993, pp. 151-162; Eijffinger and Schaling 1995.

¹⁰ We did not include statistical estimates in our empirical analysis for both this "new" group of 11 countries and the "old" group of 12 countries from Eijffinger and Schaling (1992 and 1993) because the empirical results proved to be not very different from Table 15. For the combined group of 23 countries we found insignificant coefficients for the various indices of central bank independence.

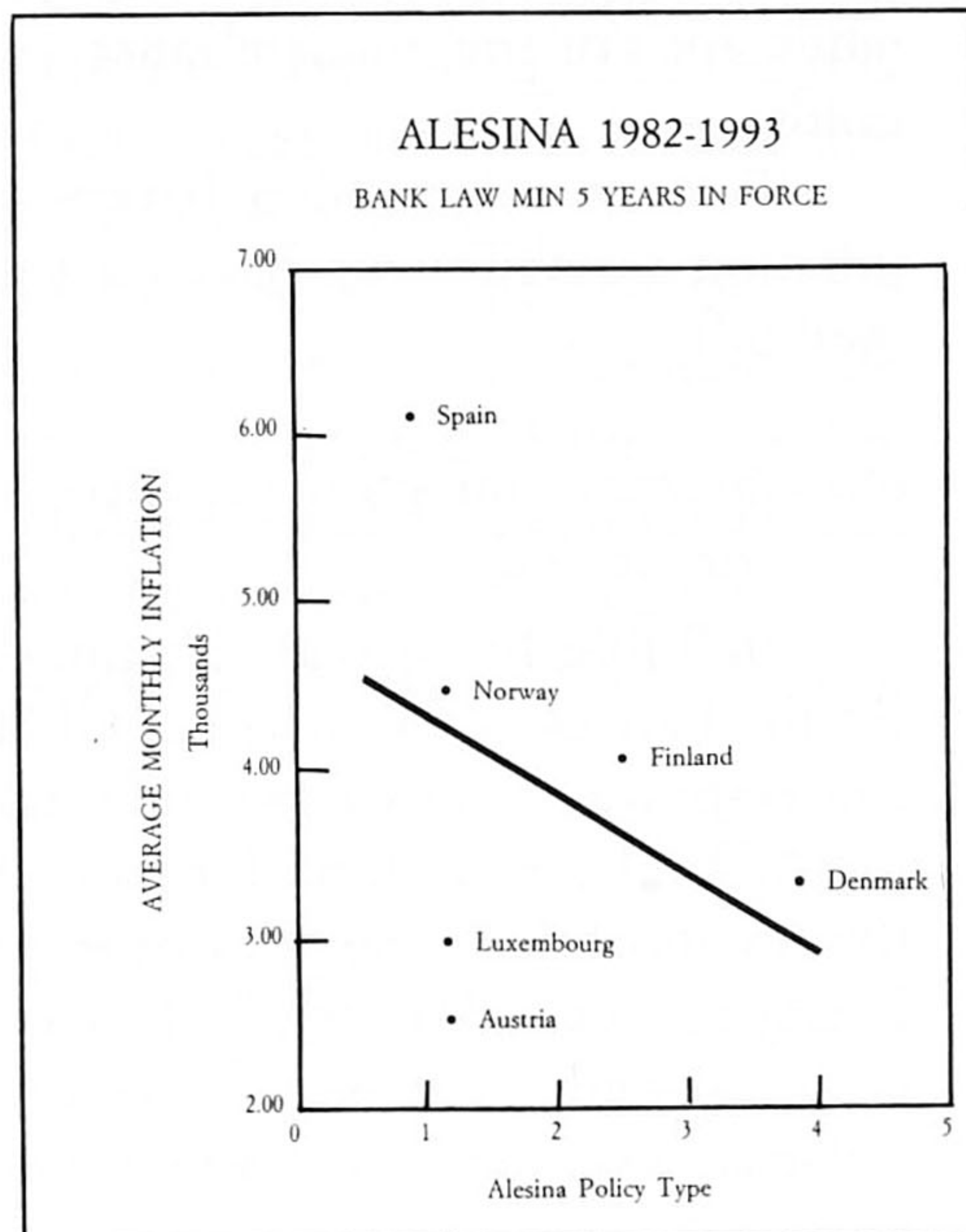
FIGURE 1

THE BADE-PARKIN INDEX
AND THE LEVEL OF INFLATION

$$\text{Average monthly inflation} = 0.005226 - 0.00058 * \text{BP}$$

(3.900) (-1.191)

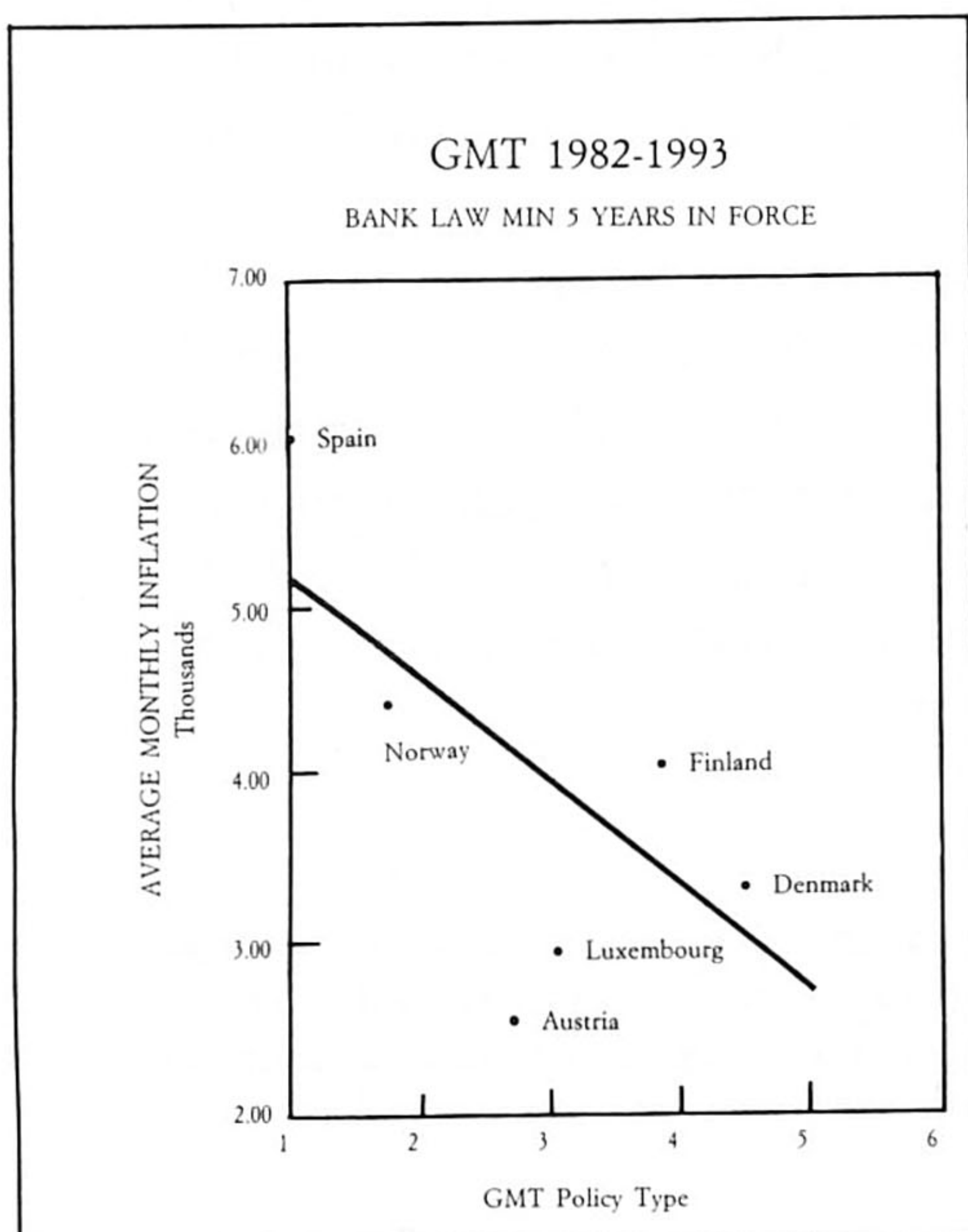
FIGURE 2

THE ALESINA INDEX
AND THE LEVEL OF INFLATION

$$\text{Average monthly inflation} = 0.004768 - 0.00047 * \text{Alesina}$$

(4.630) (-1.004)

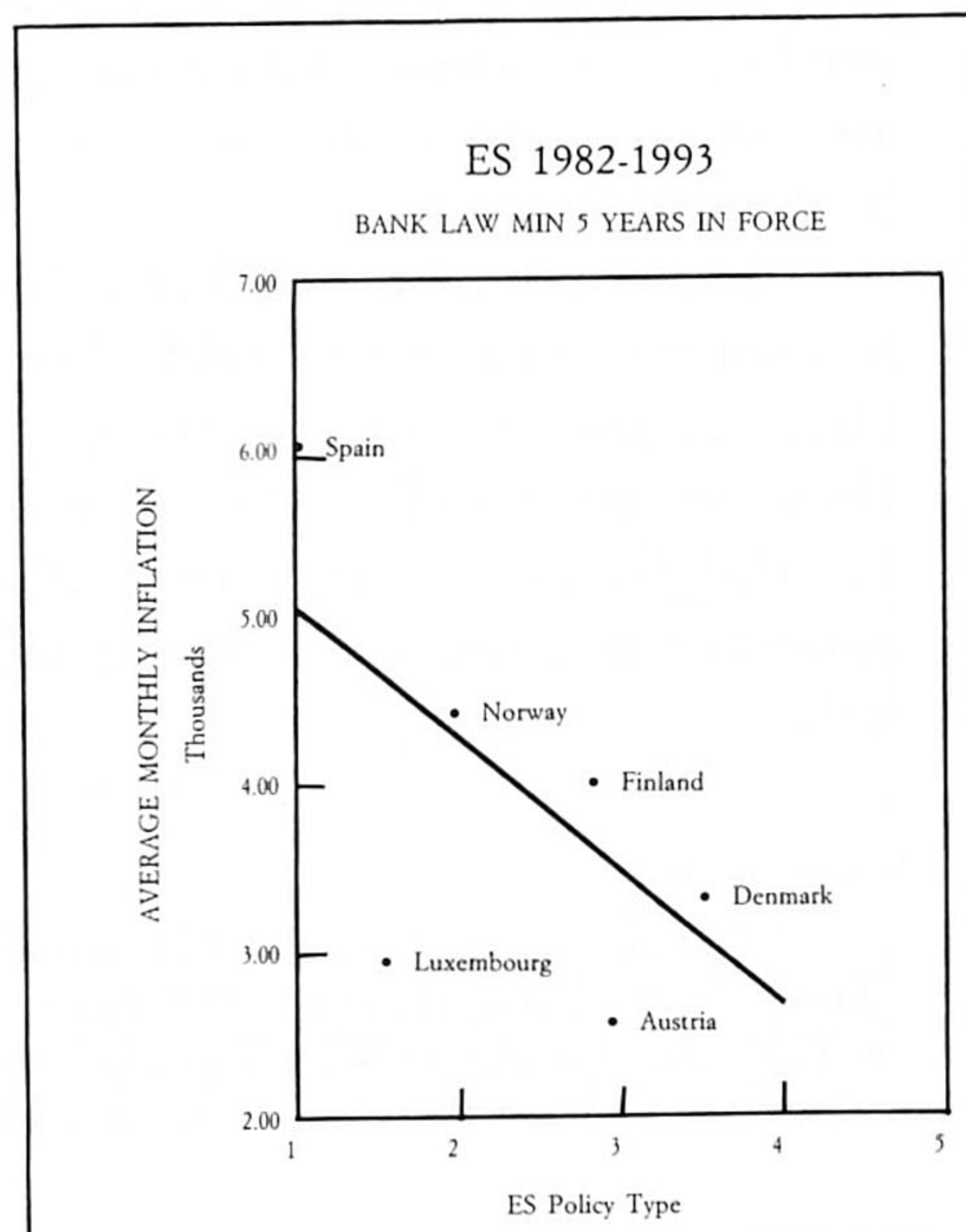
FIGURE 3

THE GRILLI-MASCIANDARO-TABELLINI
INDEX AND THE LEVEL OF INFLATION

$$\text{Average monthly inflation} = 0.005834 - 0.00062 * \text{GMT}$$

(5.820) (-2.128)

FIGURE 4

THE EIJJFINGER-SCHALING INDEX
AND THE LEVEL OF INFLATION

$$\text{Average monthly inflation} = 0.005879 - 0.0008 * \text{ES}$$

(4.978) (-1.817)

different sample periods are used. For Denmark, Finland and Spain (–1994) the period is longer than the 1982-1993 period in this section, while for Austria, Luxembourg (–1994) and Norway the opposite holds.

For the relationship between central bank independence and inflation variability we have estimated the following equation (OLS method):

$$(4.2) \text{ monthly inflation variance} = \beta_0 + \overset{(-)}{\beta_1^*} \text{ central bank independence} + \delta_t$$

In Table 16, second column, estimations for β_0 and β_1 are given for the indices of BP, Alesina, GMT and ES. The third column gives the empirical results if we only take account of the countries with central bank laws in force for more than five years. Again, we note that the results of this table must be interpreted carefully, as the degrees of liberty are limited (respectively 9 and 4). From the second column, no clear association can be seen between central bank independence and inflation variability. On the contrary, all the four indices have a positive β_1 coefficient, although it is never significant.¹¹

This result does not support de Haan and Sturm (1992) and Alesina and Summers (1993), but is compatible with Eijffinger and Schaling (1995), neither of whom find an empirical relationship between central bank independence and inflation variability. The results in the second column match those in Section 2, where no clear association could be discerned between inflation variance and central bank independence.

The third column of Table 16 gives the OLS regressions for the six countries with central bank laws in force for more than five years. It can be clearly seen that for those six countries β_1 t-values are negative. However, the GMT t-value alone is significantly different from zero. In other words, the negative relationship between central bank independence and the variability of inflation is only clear for the GMT index.

¹¹ Pooling this “new” group of 11 countries and the “old” group of 12 countries from Eijffinger and Schaling (1993 and 1995) gave more or less similar empirical results to those in Table 16: for the combined group of 23 countries we also found insignificant coefficients for the various indices of central bank independence.

Figures 5-8 show negative associations between inflation variability and central bank independence with positive outliers for Denmark and Spain and a negative one for Luxembourg. The fact that the latter has a high ranking in the GMT index may be the reason that the GMT index differs from the other three indices.

The results of the figures do not correspond with the results in Section 2 because in Section 2 data on an annual basis are used with different periods than in this analysis. The results of the empirical studies of de Haan and Sturm (1992), Alesina and Summers (1993) and Eijffinger and Schaling (1995) do not always agree with the results in this section. These authors find a significant negative relationship

TABLE 16

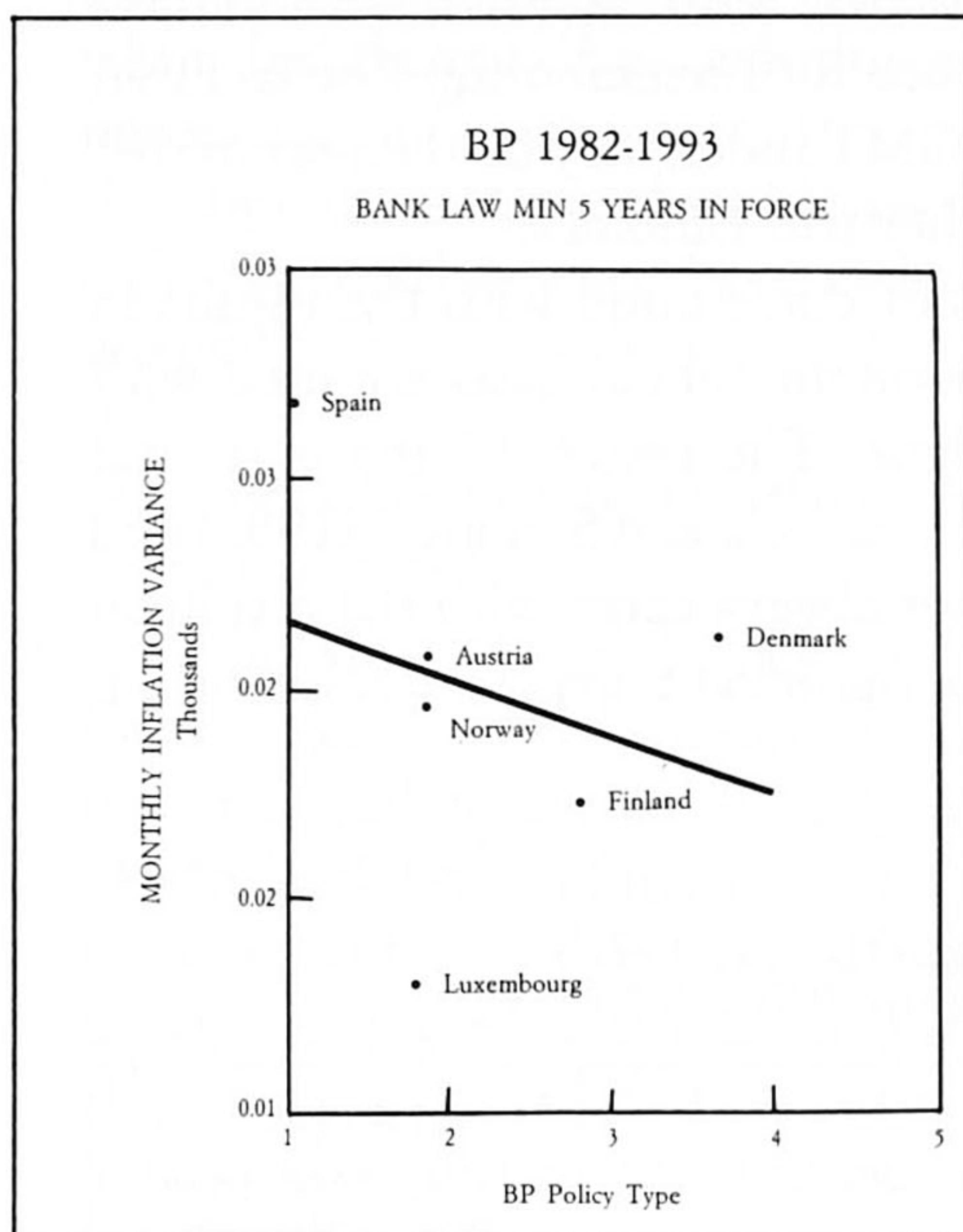
INFLATION VARIABILITY AND THE
INDICES OF CENTRAL BANK INDEPENDENCE

Explanatory variables	1982-1993	1982-1993 Central bank law in force > five years
Constant	-0.00222 (-0.482)	0.0000228 (4.330)
Bade-Parkin (BP)	0.001649 (0.868)	-0.0000013 (-0.644)
R ²	0.086051	0.09293
Constant	-0.00186 (-0.538)	0.0000214 (5.285)
Alesina	0.001715 (1.092)	-0.0000009 (-0.498)
R ²	0.129661	0.057382
Constant	0.001298 (0.305)	0.0000258 (6.292)
Grilli-Masciandaro-Tabellini (GMT)	0.0000933 (0.068)	-0.0000019 (-1.636)*
R ²	0.000582	0.397472
Constant	-0.00092 (-0.177)	0.0000226 (4.055)
Eijffinger-Schaling (ES)	0.000957 (0.501)	-0.0000012 (-0.566)
R ²	0.030434	0.073168

Source: Datastream, monthly consumer prices 1/1982-12/1993. For New Zealand only, quarterly data were available; for Poland, inflation data started from 1/1988.

FIGURE 5

THE BADE-PARKIN INDEX
AND THE VARIABILITY OF INFLATION

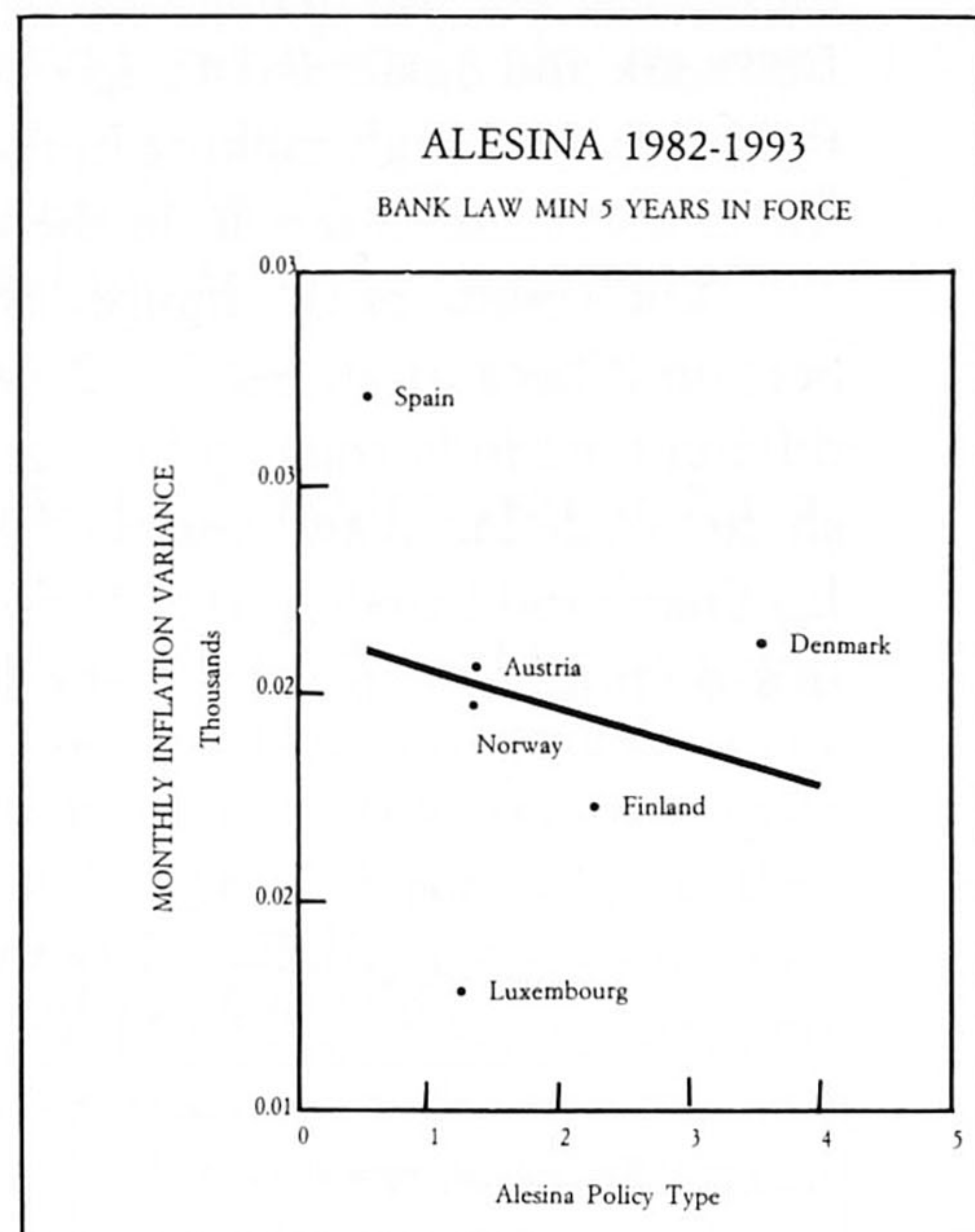


$$\text{Monthly inflation variance} = 0.0000228 - 0.0000013 * \text{BP}$$

(4.330) (-0.644)

FIGURE 6

THE ALESINA INDEX
AND THE VARIABILITY OF INFLATION

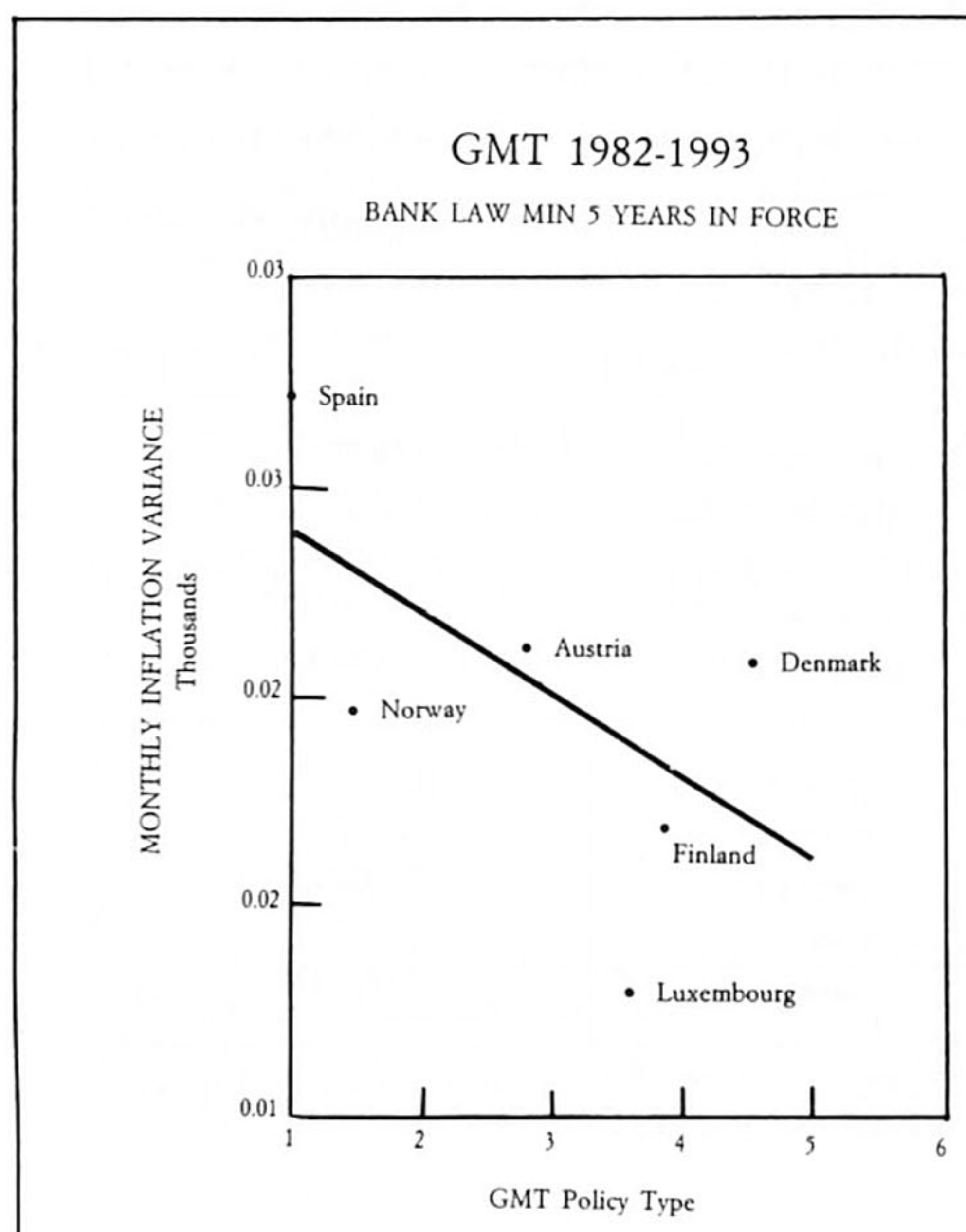


$$\text{Monthly inflation variance} = 0.0000214 - 0.0000009 * \text{Alesina}$$

(5.285) (-0.498)

FIGURE 7

THE GRILLI-MASCIANDARO-TABELLINI
INDEX AND THE VARIABILITY OF INFLATION

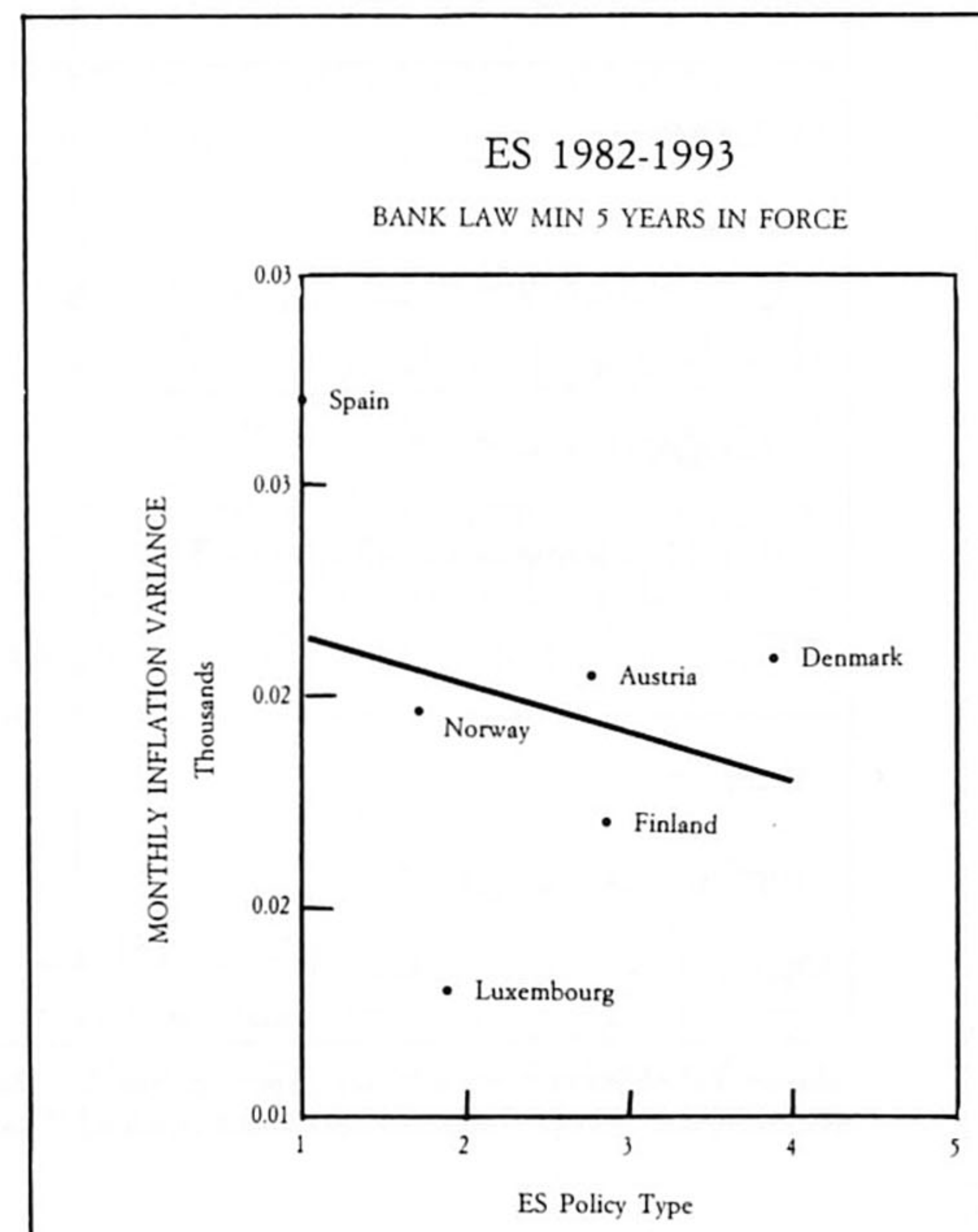


$$\text{Monthly inflation variance} = 0.0000258 - 0.00000196 * \text{GMT}$$

(6.292) (-1.636)

FIGURE 8

THE EIJFFINGER-SCHALING INDEX
AND THE VARIABILITY OF INFLATION



$$\text{Monthly inflation variance} = 0.0000226 - 0.0000012 * \text{ES}$$

(4.055) (-0.566)

between central bank independence and inflation level, while in this section no relationship can be discerned. On the basis of these results, there seems to be a positive relationship between central bank independence and inflation level for BP, Alesina and ES in all eleven countries. However, in the six countries with older central bank laws there seems to be a negative relationship.

Differences in the empirical results between this study and the three mentioned above are due to the fact that nine of the eleven countries have introduced new central bank legislation in the past ten years: for them, the transformation process from a dependent central bank regime to a less dependent one is still going on. In other words, inflation performances of the old regimes are still persistent and working through the new systems.

Another explanation could be the fact that inflation rates over a sample period of twelve years are used in this section, while longer sample periods are used in the other empirical studies.

de Haan and Sturm (1992) and Alesina and Summers (1993) find a negative association between central bank independence and inflation variability, while Eijffinger and Schaling (1995) find no association at all. They come to the same conclusion as this section: there is apparently no significant negative association between central bank independence and inflation variability. For all eleven countries there seems to be a positive association, while for the six countries there seems to be a negative association, according to our study.

Differences between de Haan and Sturm (1992) and Alesina and Summers (1993) on the one hand, and Eijffinger and Schaling (1995) and this study on the other can be explained by the fact that the first two use inflation data on an annual basis and the last two use that on a monthly basis. Moreover, the sample periods of the first two studies are longer than those of the latter.

4. Conclusion

In this study the independence of central banks in eleven countries is examined with four indices. Furthermore, we have tried to find an empirical relationship between the degree of central bank independence and the level and variability of inflation respectively. In

Section 2, no association could be discerned between independence and level or variability of inflation. Those results are confirmed by the regression analysis in Section 3. The fact that we also consider the group of countries with central bank laws which are more than five years old does not alter the results in Section 2. In Section 3 for this group of six countries the negative relationship between central bank independence and the level and variability of inflation respectively cannot be confirmed. Thus, the well-known negative relationship between central bank independence and inflation performance cannot be confirmed for our group of countries. However, the results in Section 3 for the group of six countries show that an empirical relationship does exist.

Bade and Parkin (1988), Alesina (1988, 1989), Grilli, Masciandaro and Tabellini (1991), Cukierman (1992) and Eijffinger and Schaling (1993 and 1995) find a negative association between central bank independence and level of inflation. However, they find no relationship between central bank independence and variability of inflation.

Empirical studies by de Haan and Sturm (1992) and Alesina and Summers (1993) find a negative relationship between central bank independence and the level and variability of inflation respectively. Eijffinger and Schaling (1995) also find a negative relationship between independence and the level of inflation, but none for independence and inflation variability.

Differences between the (empirical) literature and this study can be explained by: (i) in this study, a new group of countries is examined; (ii) nine of the eleven countries in this study have had new central bank laws in the past ten years; and (iii) the time periods examined in our study are shorter than those in the other studies. As stressed in the introduction, the limits of the index approach are quite evident. Legal independence of the central bank is a necessary but not a sufficient condition for actual independence, which also implies a tradition and culture of monetary stability with the policy makers.

Central bank laws

- Austria: National Bank Act 1984.
- Denmark: The National Bank of Denmark Act, 1937,
The National Bank of Denmark By-Laws, 1937.
- Finland: Regulations for the Bank of Finland, 1925,
Parliament Act, 13 January 1919,
Decision of the Council of State on the External Value of the
Markka, 7 June 1991.
- Hungary: Act LX of 1991 on the National Bank of Hungary.
- Luxembourg: Loi du 15 mars relative au statut monétaire du Grand-Duché de
Luxembourg,
Loi du 20 mai 1983 portant création d'un Institut Monétaire
Luxembourgeois,
Loi du 22 octobre 1993 relative à l'Institut Monétaire
Luxembourgeois.
- New-Zealand: Reserve Bank of New Zealand Act 1989.
- Norway: Act of 24 May 1985 relating to Norges Bank and the Monetary
System.
- Poland: Act on Narodowy Bank Polski, 1989.
- Portugal: Organic Law of the Banco de Portugal, Approved by Decree-
Law No. 337/90 of October 1990.
- Spain: Ley 30 Banco de España, Organos Rectores, 21 June 1980.
Ley de Autonomía del Banco de España, 1 February 1993.
- Czech Republic: Act on the Czech National Bank, 17 December 1992.

Additional literature on the central bank laws

Committee of Governors of the Central Banks of the Member States of the
European Community, *Annual Report 1992*, April 1993.

- Austria: "Money and the central bank", Austrian National Bank,
Vienna, 1992.
- Denmark: "Danmarks Nationalbank, central-bank responsibilities and
tasks", Danmarks Nationalbank, Copenhagen, 1991.
Annual Report 1992, Danmarks Nationalbank, Copenhagen,
1993.

- Finland: "The Bank of Finland", Suomen Pankki/Finlands Bank, Helsinki, 1993,
Rolf Kullberg: "A brief history of the Bank of Finland", Bank of Finland, *Working Paper*, 18 February 1992,
The Finnish Bankers' Association: "The Finnish banking system", 1989.
- Hungary: National Bank of Hungary: "The Law on the Central Bank", *Market Letter* NBH, 10-11/1991.
- Luxembourg: Institut Monétaire Luxembourgeois: "Le statut et l'organisation monétaires actuels du Grand-Duché de Luxembourg", *Etudes*, numéro 1, juin 1987.
- New Zealand: Frank W. Holmes: "Money, finance and the economy, an introduction to the New Zealand financial system, Auckland, 1972,
Michele Lloyd: "The New Zealand approach to central bank autonomy", *Reserve Bank Bulletin*, vol. 55, no. 3, 1992.
- Poland: OECD Economic Surveys: "Poland 1992", 1993.
- Spain: Miguel Pellicer: "Functions of the Banco de España: a historical perspective", Banco de España, *Working Paper* 9330, 1993,
G. Ganzalo: "Functions of the Bank of Spain", Banco de España, *Working Paper* 8704, 1987,
"Note on the Draft-Law of Autonomy for the Bank of Spain", Banco de España, 29 January 1993.
- Czech Republic: "Background to the Act on the State Bank of Czechoslovakia", State Bank of Czechoslovakia, 1990.

APPENDIX

Central bank laws in eleven countries

A.1. Austria

The first Austrian central bank, *Privilegierte österreichische National-Bank*, dates from 1816. In 1878, it became the Austro-Hungarian Bank. After the First World War, this ceased to exist and was succeeded by *Österreichische Nationalbank*. Austria was annexed by Nazi Germany in 1939 and the Bank was dismantled but this process was not completed before the end of the Second World War. To support Austrian independence, the Austrian National Bank resumed its activities in 1945. New statutes were adopted in 1955. The current central bank law came in force into 1984 and was based on the 1955 law.

The Austrian National Bank is a joint stock company. Tasks and organisation are described in the statute of 1984. The primary objective of the bank is price stability, viz. article 2(3); "It [the Austrian National Bank] shall ensure with all means at its disposal that the value of the Austrian currency is maintained with regard both to its domestic purchasing power and to its relationship with stable foreign currencies".

"In determining the general lines of monetary and credit policy to be followed by the Austrian National Bank in this field for the purpose of performing the functions incumbent upon it, due regard shall be paid to the economic policy of the Federal Government",¹ i.e. the government has no right to give instructions to the bank. This is confirmed in article 41(2): the Federal Republic is not allowed to take measures that could hinder the central bank in the execution of its legal objectives.

The bank is independent of the government but, in practice, takes an active part in the development of economic policy and co-operates closely with the government. Other tasks of the bank are regulating the circulation of money and attending to the settlement of payments with foreign countries; according to the Foreign Exchange Act, the bank is the Austrian foreign exchange authority.

The governing bodies of the bank are the General Meeting, the Governing Board and the Board of Executive Directors. The General Meeting elects six members of the Governing Board. "For the purpose of the election of six members of the Governing Board by the General Meeting, shareholders other than the Federal Republic may propose one person for each 12.5 million schillings of capital represented by the shareholders. If such proposals are not made, the right of proposal shall rest with the Federal Republic".²

¹ National Bank Act 1984, art. 4.

² Ibidem, art. 18(1).

The Governing Board is in charge of the overall direction and supervision of all the bank's actions. The Board has many tasks, such as "laying down the general directives of monetary and credit policy and giving its opinion on draft legislation in so far as the latter concerns important questions of monetary and credit policy",³ fixing the discount and lombard rates and determining the open market policy. So the Board can independently make its own monetary policy and has a free choice of monetary instruments. The Governing Board consists of the Governor of the bank, two Deputy Governors and eleven ordinary members. The Governor is appointed by the President for a five-year term. He acts as chairman at all meetings of the Board and sees that decisions of the Board are properly executed.

The First and Second Deputy Governor are appointed by the government for five years, as well as five of the other members of the Governing Board. The Board of Executive Directors is in charge of the daily management of the bank. Because Austria has linked its currency to that of Germany, the Executive Directors' main occupation is the stabilisation of the schilling versus the mark. The Board of Executive Directors is mainly an executive body but "shall take decisions independently on all matters concerning the running of the Bank and the conduct of the business that are not reserved for decision by the Governing Board".⁴

The Federal Minister of Finance ensures that the bank acts legally and, for this, appoints a State Commissioner, who may attend the meetings of the Governing Board in an advisory capacity and is entitled to total co-operation and information from the bank. Through the State Commissioner, the government can influence on policy of the bank since he can "raise objections to decisions of the Governing Board if he considers any such decision to be in conflict with existing legislation".⁵

The bank cannot finance the government, but the Federal Minister of Finance can request it to buy short-term Federal Treasury certificates. The total amount, however, may not exceed five percent of the yearly federal tax revenues.

A.2. Denmark

Nationalbanken i Kjobenhavn was created in 1818 to assure monetary stability and had the right to issue notes. The bank became the sole banker of the Danish State in 1914 and in 1936, with the National Bank of Denmark Act, the National Bank in Copenhagen was transformed into *Danmarks Nationalbank*, the current central bank.⁶

³ Ibidem, art. 20.

⁴ Ibidem, art. 21.

⁵ Ibidem, art. 45-46.

⁶ "Danmarks Nationalbank, central bank responsibilities and tasks", Danmarks Nationalbank, Copenhagen, 1991, pp. 7, 8.

The objective of the bank is described in article 1 of the central bank law: "Danmarks Nationalbank [...] shall as the central bank of this country [...] maintain a safe and secure currency system in this country, and facilitate and regulate the traffic of money and the extension of credit". In other words, it has to stabilize purchasing power and at the same time to keep up with economic developments, so price stability is its main objective.

In order to do so, the bank makes its own monetary policy and is responsible for the management of foreign currencies. Exchange rate policy is in the hands of the government but is carried out by the bank. Banking supervision is not carried out by the bank, but by the Danish Financial Supervisory Authority.

The bank is ruled by the Committee of Directors, the Board of Directors, the Board of Governors and the Royal Bank Commissioner. The Board of Governors has three members: the chairman is appointed by the King, i.e. the government. The other two are appointed by the Board of Directors, but the Parliament has a major influence on those two appointments. The board members are appointed for life but can be relieved from their office by the King or the Board of Directors.⁷ Until now this has never occurred and dismissal of a board member would be the ultimate step in case of a serious conflict between the Board of Governors and the government.

The Board of Directors consists of 25 members, of whom eight are elected by Parliament, 15 by the Board and two by the Minister of Economic Affairs. The Board of Directors has administrative and advisory capacities. The Committee of Directors has seven members; two are appointed by the Minister of Economic Affairs and five elected from the Board of Directors by the Board itself. The Committee has an intermediate position between the Board of Governors and the Board of Directors.

The Minister of Trade, Industry and Shipping, in his capacity of Royal Bank Commissioner, ensures that the bank carries out its duties. He presides over meetings of the Board of Directors and attends those of the Board of Governors. The Commissioner is the formal contact between the government and the bank.

The Board of Governors is responsible for monetary policy making, as clearly stated in the central bank law; "The Board of Governors shall fix the rate of discount and the rate of interest for advances".⁸ In changing those rates, the Governors have to inform the Royal Bank Commissioner and the Minister of Finance, but the final decision rests with them.

In practice, monetary policy is formulated on the basis of co-operation between the government and the Board of Governors: the government cannot

⁷ National Bank of Denmark Act, 1937; By-Laws on the National Bank of Denmark, 1937.

⁸ By-Laws on the National Bank of Denmark, 1937, art. 25.

give instructions to the Board. Exchange rate policy is also determined by mutual co-operation, although it is formally a government issue.

The bank can give the government credit against "satisfactory security and normally for 1-3 months not exceeding 6 months".⁹ However the government does not use this credit facility because of the co-operation in the field of monetary and exchange rate policy making. Instead, it finances its deficits by selling government paper on the capital market.

A.3. Finland

The central bank of Finland, *Suomen Pankki*, was created in 1811 and is one of the oldest in the world. Until 1868, it was under the control of the Senate; after this date the bank had to justify its actions to Staten, the Parliament. In 1875 the main objective of the bank was to maintain a stable and balanced monetary system and to stimulate money circulation. Eleven years later, it also received the sole right to issue money.

Finland became an independent state in 1917 and, according to the constitution of 1919, article 73, the bank was "under the guarantee and care of Parliament and under the surveillance of the Parliamentary Supervisory Board appointed by Parliament". At the end of 1925, the Regulations for the Bank of Finland came into force. In spite of several adjustments, they still form the central bank law of Finland.¹⁰

Its main objective is clearly stated in article 1 of the central bank law: "The object of the Bank of Finland is to maintain a stable and secure monetary system and to assist and facilitate the circulation of money in Finland". This means that the bank does not have price stability as its main objective.

According to article 2 of the Currency Act of 1962, it is responsible for maintaining the external value of the markka, the Finnish currency. In case of shocks in the foreign exchange market, the bank can deviate from the fluctuation margins of the markka. However, the government can revoke this right, after consultation with the bank. The government has a right of say on the external value of the markka, but co-operation in this area is stipulated by law.

There are no formal provisions which prevent the government from borrowing from the bank but normally only in exceptional circumstances does the bank give credit. The government has no power to give the bank instructions because the bank is under control of the Parliament. This can be concluded from article 2 of the Regulations for the Bank of Finland: "The Bank carries its business

⁹ National Bank of Denmark Act, 1937, art. 15.

¹⁰ "The Bank of Finland", Suomen Pankki/Finlands Bank, Helsinki, 1993, p. 4. Rolf Kulberg: "A brief history of the Bank of Finland", Bank of Finland, *Working Paper*, 18 February 1992.

under the guarantee and supervision of the Diet [Parliament]". In practice the bank is monetarily independent of the government but works together with it – in particular the Minister of Finance – to better co-ordinate economic policy.

The policy board of the bank, the Parliamentary Supervisory Board, consists of nine members, all appointed by Parliament for the whole parliamentary term (four years). A Supervisor can be a member of Parliament. The most important task of the Supervisors is to "fix the base rate of the Bank and other rates of interest applied by the Bank and limits thereon",¹¹ i.e. the bank is independent in monetary policy making.

Three Supervisors are appointed by Parliament as members of the Executive Committee of the Parliamentary Supervisory Board. The Executive Committee has to take care of matters not reserved for the Parliamentary Supervisory Board and to prepare decisions for the Board. "The administration of the Bank of Finland and management of the affairs are entrusted to the Board of Management, except in the case of those duties that are reserved in these regulations for the Bank Supervisors".¹² The Board of Management must always ensure that the markka keeps its legally established value, as fixed by the government. Furthermore, the Board of Management gives support to the Supervisors. The board members are appointed by the President of the Republic on the proposal of the Supervisory Board.

A.4. Hungary

The Institute of Budapest of the Austro-Hungarian Bank had the function of central bank in Hungary until the end of the First World War. In 1924 the Hungarian Parliament established the National Bank of Hungary. After the Second World War, all Hungarian banks were nationalised and from then on, the *National Bank of Hungary* was the only bank in the Hungarian financial system, apart from some specialized financial institutions. On January 1, 1987, the separation between central bank and commercial bank was re-established. All commercial activities of the Hungarian Central Bank have now been transferred to the commercial banking system.¹³

These changes in the financial system required a new central bank law, adjusted for a market economy and with an obvious place for monetary policy within economic policy. On November 16, 1991 the new central bank law came in force: its main objective is to strengthen the stability of the Hungarian currency, the forint. Thus the bank has to pursue price stability as primary objective. In doing so, "the National Bank of Hungary (NBH) develops its

¹¹ Regulations for the Bank of Finland, Helsinki, 21 December 1925, art. 17(1).

¹² Ibidem, art. 16.

¹³ National Bank of Hungary: "The Law on the Central Bank", *Market Letter NBH*, 10-11/1991.

monetary policy as well as the instruments serving its implementation in an autonomous way in the framework of this act".¹⁴ The government cannot influence the monetary policy of the central bank and "The Government shall not give instructions to NBH in the scope of its tasks defined in this Act".¹⁵ In other words, the bank is independent of the government in monetary policy making although monetary policy has to stay within the limits of the central bank law.

With regard to the exchange rate, the central bank law states that "the order of determining and/or influencing the exchange rates is approved by the government in agreement with the NBH".¹⁶

The bank has to support the implementation of the economic policy program of the government with all monetary policy means available and has to make its opinion clear about the government's plans and actions. On the one hand, it is independent of the government and thus can fulfil its tasks in a balanced way in the long run and, on the other, is obligated by law to co-operate with the government.

The main bodies of the bank are the General Meeting, the Central Banking Council, the Board of Directors and the Supervisory Commission. The Central Banking Council, the policy board of the bank, makes decisions about the annual policy guidelines and the modifications of the policy instruments of the central bank, inclusive of exchange policy measures. The Council consists of the President of the bank, no more than five of its vice-presidents and the same number of other members as vice-presidents. A government representative is invited to all the meetings of the Central Banking Council in an advisory capacity.

The Council is appointed by the President of the Hungarian Republic on the proposal of the Prime Minister. The term of the President of the bank is six years (renewable); for the other council members, it is three years (renewable). The President of the bank is responsible for the execution of the decisions of the Council.

The Board of Directors supports the bank President in carrying out his tasks. The Board has a mere advisory function. The Supervisory Commission is the supervising organ of the bank. The Commission is obliged to inform Members of Parliament and the Minister of Finance who respectively elect and appoint it. The law does not say exactly about what the Commission has to inform the Minister and Parliament.

The General Meeting has numerous tasks, such as establishment and modification of the statutes and election and recall of the elected members of the Board of Directors. The shares of the bank are held by the State, which is represented by the Minister of Finance although the latter cannot exert much influence on the monetary policy of the bank through the General Meeting since it has no decisive voice in the monetary policy of the bank.

¹⁴ Act LX on the National Bank of Hungary, art. 6.

¹⁵ Ibidem, art. 45.

¹⁶ Ibidem, art. 12(2).

The bank can finance the government through the central budget with a maximum of three percent of expected income of the central budget in that year. Other government bodies have to solve their deficit in the capital market or via the central budget. The bank has to justify the credit relations with public finances to Parliament.

A.5. Luxembourg

Luxembourg has had several monetary regimes since the French Revolution. First, the Dutch monetary system and, during the Belgian Revolution, the Belgian regime. Then the German *Zollverein* was in force until the end of the First World War. In 1922, the monetary union with Belgium (the Belgian-Luxembourg Monetary Union) was instituted.

The central bank, the Luxembourg Monetary Institute, was established in 1983. In 1994, a law was adopted to give the institute a greater degree of independence, as required in the Treaty of Maastricht.

According to article 2 of the law of 22 October 1993 "relative à l'Institut Monétaire Luxembourgeois", the bank has as its main task price stability and the government has no right of instruction. Article 5(2) of the central bank law of 1993 states very explicitly that the Luxembourg Monetary Institute cannot receive monetary policy instructions; "Dans l'exercice des pouvoirs et dans l'accomplissement des missions et des devoirs qui leur ont été conférés dans le domaine monétaire, ni l'Institut, ni un membre quelconque de ses organes de décision ne peuvent solliciter ni accepter des instructions ou organes de la Communauté européenne, des gouvernements des Etats membres ou de tout autre organisme".

The bank is in charge of exchange rate management, however the government has final authority over exchange rate policy. Luxembourg is still a member of the Belgian-Luxembourg Economic Union which means that exchange rate parity with Belgium is important, i.e. Belgium can exert indirect influence through its monetary policy on that of Luxembourg. However, because of the Union, both countries must have compatible monetary policies. Other tasks of the bank are management of the official reserves and stimulation of a well functioning payments system.

To achieve price stability, the bank can operate on financial markets or give advances against collateral. Article 24(1) states that it can no longer give credit to the government. It also exerts supervision in the financial sector.

The main bodies of the bank are the Board and the Council. The Board is the policy board and prepares measures and takes decisions in the context of the price stability objective. The members of the Board are the Director General and two to four Directors. They are all appointed by the Grand Duke on the proposal of the government. The term for the board members is six years, renewable. Dismissal from office is only possible in case of proven incompetence and no

longer being able to fulfil the condition of "personal honour". The Council has no policy making powers but can give advice on monetary policy matters. Its three to five are members appointed by the government for four years, renewable. The Council is presided by the Director General of the bank.

Because of the Belgian-Luxembourg Economic Union, the bank can only issue a limited amount of money per year. For historical reasons *La Banque Internationale à Luxembourg* can also issue money, since 1967 however with a limit of 50 million Luxembourg francs a year.

A.6. New Zealand

At the beginning of this century, the New Zealand economy was based on the sterling standard; Australian and New Zealand pounds were linked to the British currency. Abolition of this parity caused problems for New Zealand, as the Australian pound devaluated more than the New Zealand pound. This resulted in the New Zealand demand for its own currency, which resulted in the creation of the central bank of New Zealand, the Reserve Bank.

The current central bank law, the Reserve Bank of New Zealand Act 1989, replaced the Reserve Bank Act of 1964. The act of 1989 was a result of the reaction to the weak economic performances in New Zealand during the period 1970-1980. The country suffered from an expanding government debt, yearly inflation of more than ten percent and an average annual economic growth of 1.4 percent. This strengthened the belief that economic policy had to change. As a consequence, long-term price stability was given more emphasis in monetary policy.

"The primary function of the Bank is to formulate and implement monetary policy directed to the economic objective of achieving and maintaining stability in the general level of prices".¹⁷ In the formulation and the execution of monetary policy, the bank has to take account of the efficiency and soundness of the financial system. It has also to "consult with, and give advice to, the Government and such persons or organisations as the Bank considers can assist to achieve and maintain the economic objective of monetary policy".¹⁸ The rationale for this is that only efficient monetary instruments should be used and that monetary and financial stability are closely linked, because radical changes in monetary policy can seriously damage the stability of the financial system. The obligation to co-operate with other parties prevents the bank from operating in a vacuum.

It is free to formulate monetary policy in order to achieve price stability. By choosing price stability and an independent central bank, the government showed that priority was given to reducing inflation and stimulating economic growth.

¹⁷ Reserve Bank of New Zealand Act 1989, art. 8.

¹⁸ Ibidem, art. 10.

However, monetary policy has to be clearly adjusted to price stability and "The Minister [of Finance] shall, before appointing, or reappointing, any person as Governor, fix, in agreement with that person, policy targets for the carrying out by the Bank of its primary function during that person's term of office, or next term of office, as Governor".¹⁹ Those policy targets formulate limits for inflation for part of or for the entire term of the Governor.²⁰

Also, the government has the right "from time to time, by order in Council, on the advice of the Minister, to direct the Bank to formulate and implement monetary policy for any economic objective, other than the economic objective specified in Section 8 of this Act, for such a period not exceeding 12 months as shall be specified in the order".²¹ This is a right of instruction of the government; it can demand that the bank adjust monetary policy to the economic policy preferred by the government. It should be noted that this procedure is complicated, as it requires an order in Council, must be made publicly known and has to be laid before the House of Representatives.

The bank can act independently on the foreign exchange rate market, but the government has the final right of say in the exchange rate policy.

The management of the bank consists of the Governor and the Board of Directors. The Governor is appointed by the Minister of Finance on the proposal of the Board of Directors for a period of five years, renewable. He is the Chief Executive of the bank and must see to it that it fulfils its statutory tasks. Besides the Governor, there are one or two Deputy Governors. One is the Deputy Chief Executive of the bank and both are nominated by the Board for five years on the proposal of the Governor. The Governor decides the functions of the Deputy Governors. The Board of Directors has seven to ten members: the Governor and the Deputy Governor(s) of the bank and four to seven non-executive directors, appointed by the Minister of Finance for five years.

The Board supervises the bank and the Governor and ensures that price stability objectives are respected. "The Board may give advice to the Governor on any matter relating to the performance of the Bank's functions and the exercise of its powers",²² i.e. the Governor alone is responsible for the monetary policy and achieving the Policy Targets Agreement: he is the policy board of the bank.

The bank does not give credit to the government because monetary financing is contrary to the price stability objective, although it is not legally forbidden.

A.7. Norway

Norges Bank, the central bank of Norway, was created in 1816. The bank functioned under the central bank law of 1892 until 1985, when a new one was adopted: the Act of 24 May 1985 relating to *Norges Bank* and the Monetary System.

¹⁹ Ibidem, art. 9(1).

²⁰ The Governor of the Reserve Bank of New Zealand and the Minister of Finance agreed to a Policy Targets Agreement for 1993 of an inflation rate between zero and two percent.

²¹ Reserve Bank of New Zealand Act 1989, art. 12(1).

²² Ibidem, art. 52-63.

"Norges Bank is the country's central bank. The Bank shall be an executive and advisory body for monetary, credit and foreign exchange policy. It shall issue banknotes and coins, promote an efficient payments system domestically as well as vis-à-vis other countries, and monitor developments in the monetary, credit and foreign exchange markets.

The Bank may implement any measures customarily or ordinarily taken by a central bank. To further its objectives the Bank may engage in all types of banking business and banking services".²³ That is, price stability is obviously not its main objective.

"Norges Bank shall conduct its operations in accordance with the political and economic guidelines drawn up by the government authorities and with the country's international commitments".²⁴ In other words, the government determines monetary policy and bank has to follow that policy; it is not independent. The government has also an explicit right to give the bank instructions: "The King in council may pass resolutions regarding the activities of the Bank. Such resolutions may take the form of general rules or instructions in individual cases".²⁵ This right of instruction, however, should be seen as an ultimate means in case of a conflict between the government and the bank.

The bank has to put every important decision before the Minister of Finance. It also has to inform the public about the monetary, credit and foreign exchange situation. The external value of the Norwegian currency, the krone, and modifications thereof, are determined by the government. The bank is responsible for exchange rate management.

The principal bodies of the bank are the Executive Board and the Supervisory Council. The Governor and the Deputy-Governor of bank are chairman and deputy-chairman of the Board. They are appointed full-time for six years (renewable). The other five members are nominated part-time for four years with a maximum term of 12 years. The Board is the executive and advisory authority of the bank: it is in charge of its activities and administers its funds.

The Supervisory Council has 15 members, elected by Parliament for a term of four years. All members have a maximum term of 12 years. The Chairman and the Deputy-chairman are elected among the Supervisors, also by Parliament, for two years. The Council sees to it that the bank's activities are properly executed.

The bank can give the government seasonal and other short-term credit, with specific limits to be stipulated by Parliament. Under special circumstances there is also the possibility of long-term credit, whose limits are stipulated by Parliament.

²³ Act of 24 May 1985 relating to Norges Bank and the Monetary System, art. 1.

²⁴ Ibidem, art. 2.

²⁵ Ibidem, art. 2-3.

A.8. Poland

The National Bank of Poland, *Narodowy Bank Polski* (NBP), was created in 1948 when the Polish financial system was disrupted after the Second World War.²⁶ After 1950, when the last commercial banks were closed, the Polish financial system closely resembled the Soviet system. Until 1989, the NBP was the only bank in Poland. At the beginning of that year, however, it again became a real central bank as the division between central bank and commercial bank was re-established. The NBP was divided and retained only the traditional central bank objectives. Together with the re-establishment of the central-commercial bank division, the new statute for the Polish central bank came into force. Despite several adjustments to this statute, the Act on *Narodowy Bank Polski* is still the central bank law of Poland.

Article 1 proclaims the NBP as the central bank of the country with tasks such as issue of money, central clearing and credit institution as well as central banking institution for foreign exchange control.

The main objectives of the bank are "issuing legal tender of the Republic of Poland, granting refinancing credits to other banks, accepting deposits, carrying out monetary settlements, organizing operations in foreign currencies in accordance with provisions of the Foreign Exchange Control Law, performing banking services for the state budget and other activities as provided in the present act".²⁷ This last task signifies the supervision of the financial sector. The primary objective of the bank is aimed especially at strengthening the Polish currency. External stability rather than price stability has priority.²⁸

The bank co-operates in the forming and execution of the economic policy of the government, within its range of possibilities and according to acts and resolutions of the Parliament. This means that the Parliament has influence on the bank through economic policy. "Within the range of its activities the National Bank of Poland initiates and forms monetary policy including also foreign exchange policy, according to the recommendations of the Sejm".²⁹ That is, the Parliament also has a direct influence on the bank's monetary policy.

The NBP has a President, Deputy Presidents and a Board of Management. The President, appointed by Parliament on the proposal of the President of the Republic for a term of six years, is in charge of the management of the bank.

Co-operation between the bank, Parliament and government is stipulated by law as the President of NBP takes part in meetings of Parliament and the Council of Ministers. The Deputy Presidents are appointed by the President of the Republic on the proposal of the President of NBP.

²⁶ The history of the central bank in Poland goes back further than 1948. The first bank fulfilling this function in Poland – the Bank of Poland – was established in 1924.

²⁷ Act on *Narodowy Bank Polski*, 1989, art. 6.1.

²⁸ It should, however, be mentioned that the real strength of domestic currency *vis-à-vis* other currencies depends mainly on controlling the level of inflation. So, price stability plays an important role in NBP policy, although it is not an explicit policy goal.

²⁹ Act on *Narodowy Bank Polski*, 1989, art. 6.2.1 and 6.2.2.

Members of the Board of Management are the President and Deputy Presidents of NBP and other members, directly nominated by the President of the bank. Neither the government nor Parliament have a representative on the Board of Management. The exact number of Deputy Presidents is not given in the central bank law; neither is the number of other members of the Board of Management.

The Board is the highest policy authority of the bank and "considers main issues within the scope of activities of the NBP and adopts resolutions necessary to perform tasks of the NBP, regarding in particular:

- 1) [...],
- 2) functioning of credit and monetary systems,
- 3) monetary policy,
- [...],
- 7) interest rate policy,
- [...].³⁰

The NBP can finance the government by buying bills of exchange issued by State Treasury. On a yearly basis, this amount cannot exceed two percent of the forecast government expenses.

A.9. Portugal

The *Banco de Portugal* "is the central bank of the Portuguese Republic and in such capacity it shall ensure the internal monetary equilibrium and the external solvency of the currency".³¹ Thus, it has to pursue price and exchange rate stability.

"As central bank, it shall be particularly incumbent on the Bank, taking into account the Government's guidelines, to:

- a) Cooperate in the formulation of and execute the monetary and exchange rate policy;
- b) Manage the foreign assets of the country or any other assets entrusted to it;
- c) Act as intermediary in the international monetary relations of the State;
- d) Provide for stability of the domestic financial system, performing for the purpose the function of lender of last resort".³²

³⁰ Ibidem, art. 49.

³¹ Organic Law of the Banco de Portugal, Approved by Decree-Law No. 337/90 of October 1990, art. 3.

³² Organic Law of the Banco de Portugal, Approved by Decree-Law No. 337/90 of October 1990, art. 18.

The bank also advises the government on monetary, financial and exchange rate matters, supervises the financial sector and issues banknotes.

As noted above, it has no independent monetary policy authority but is alone responsible for the execution of monetary and exchange rate policy. Also, in execution of these policies, it "may carry out any operations justified by virtue of its capacity as central bank, namely the following:

- a) To rediscount and discount for a period not exceeding one year, drafts, certificates of indebtedness, invoice statements, warrants and other similar credit instruments, under the condition laid down by the Board of Directors;
- b) To buy and sell securities issued by the Portuguese State;
- c) To grant loans to credit and quasi-banking institutions for a period not exceeding one year".³³

The main bodies of the bank are the Governor, the Board of Directors, the Board of Auditors and the Advisory Board.

The Governor has to represent the bank, act on its behalf with foreign or international institutions and to supervise the Board of Directors. Like the members of the latter, he is appointed by the council of ministers on proposal of the Minister of Finance for a renewable term of five years. He has the power to suspend decisions of the Board of Directors or by executive committees which he judges contrary to the law, the country or the central bank. However, such a suspension has to be approved by the Council of Ministers within 15 days, otherwise the suspension ceases to exist.

The Board of Directors consists of the Governor of the bank, one or two Deputy Governors of the bank and three to five Directors. The Board of Directors is responsible for all actions needed to achieve the objectives of the bank that are not within the competence of other bodies of the bank. It therefore follows that the Board is responsible for the price stability objective. The Board of Directors can delegate powers to executive committees. In practice, there are regular meetings between the Board and the Minister of Finance; however, the members of the Board cannot receive monetary policy instructions.

The Board of Auditors has four members: three are appointed by the Minister of Finance and one by the employees of the bank. The main task of the Board of Auditors is financial supervision of the bank.

The Advisory Board gives its opinion on the annual statement of the bank and on matters laid before the advisors by the Board of Directors.

"The State may resort to an account, free of charge, opened with the Bank whose debit balance shall not exceed 10 percent of the current revenue collected in the previous year".³⁴ Monetary financing is possible because "the Bank shall not grant credit to the State nor any other public-law juridical person except

³³ Ibidem, art. 35.

³⁴ Ibidem, art. 26.1.

through the underwriting of treasury bills under terms agreed between the Finance Ministry and the Bank with due observance of legal ceilings.³⁵

Because of the Treaty of Maastricht, it should be noted that the central bank law of Portugal has to be modified to fulfil the conditions for an economic and monetary union in Europe. In order to meet these requirements, the bank has to become independent of the government.

A.10. Spain

The predecessor of the current Spanish central bank was the Bank of San Carlos, established in 1782. This merged with the Bank of Isabel II in 1847 and became the New Spanish Bank of San Fernando. With the first bank law in Spain, 1856, its name was changed to *Banco de España*. The Bank of Spain was nationalised in 1962 and became the central bank of Spain.

In 1980 a new statute for the bank was adopted; its tasks were redefined and its independence was strengthened. The present statute for the Bank of Spain was passed by the Parliament in October 1993 and adjusted the former central bank law to the Treaty of Maastricht.

The law of February 1, 1993, which increases the independence of the bank, is taken from the Statute for the European Central Bank and the Treaty of Maastricht. Parts of the 1980 law are used, especially regarding the governing bodies of the bank. The major changes have occurred in the field of monetary policy and financing government debt.

Article 2 of the law gives the bank control over monetary policy; it is responsible for formulating and executing monetary policy with price stability as its main objective. Monetary policy, however, has to support government economic policy if that policy is focused on stable prices and has no inflationary character.

According to article 6, exchange rate policy remains the government's concern, but the government has to consult with the bank on exchange rate matters, with a view to avoiding any potential conflict between exchange rate policy and the objective of price stability.

Other tasks of the bank are supervision of financial institutions, promoting stability of the financial system and issuing currency.

The main bodies are the Governing Council, the Executive Commission, the Governor and the Deputy Governor.

The Governor is appointed by the King on the proposal of the Prime Minister for one six-year term. The Deputy is appointed for the same term, but by the government on the proposal of the Governor of the bank.

³⁵ Ibidem, art. 27.1.

The Governing Council consists of the Governor, the Deputy Governor, six members, the General Director of Treasury and Finance, the Deputy Chairman of the National Stockmarket Commission, all the General Directors of the bank and the General Secretary of the bank. The six members are appointed by the government on the proposal of the Minister of Finance, in liaison with the Governor of the bank, for a term of eight years. The General Director of Treasury and Finance and the Deputy Chairman of the National Stockmarket Commission have no voting right concerning monetary policy making. The General Directors and the General Secretary of the bank have no voting right at all.

Guidelines and execution of monetary policy are fixed by the Governing Council. The Minister of Finance may by exception attend the meetings of the Council in an advisory capacity. Daily management is in the hands of the Executive Commission, whose members are the Governor and the Deputy Governor of the bank and two others, who are among the six members of the Governing Council and are appointed by it on the proposal of the Governor. The General Secretary is a member with no voting right. The General Directors of the bank may attend the meetings of the Commission in an advisory capacity.

The government has no right of instruction, in accordance with the main motive of the new statute, increasing the bank's independence. Also, the bank can no longer give the government credit. Monetary financing is forbidden in the new law of 1993, in accordance with the Treaty of Maastricht.

A.11. Czech Republic

The history of the Czech financial system is identical to the Slovak financial history, as these two Republics formed a single state until 1993.

The banking system in Czechoslovakia originated in 1918 when the Austro-Hungarian banks in Czech territory came under the control of the new Czechoslovakian State. At that time, the central bank was part of the Ministry of Finance. In 1926 those tasks were transferred to the National Bank of Czechoslovakia. After the Second World War, the Czechoslovakian financial system was replaced by the communist system and the State Bank of Czechoslovakia was created in 1950. This central bank was also the only commercial bank in the country, apart from two pre-war banks.

With the fall of the Berlin Wall in 1989, democracy was restored in Czechoslovakia and economic changes made. The division between central and commercial banking (embodied in law 130/1989 on the State Bank of Czechoslovakia) was replaced by the Act No. 22/1992 Collection of Laws on the State Bank of Czechoslovakia because the former could not adjust to the fast changing economic environment.

On November 25, 1992, the Federal Parliament of Czechoslovakia decided to dissolve the Czechoslovakian Republic. On January 1, 1993, the *Czech National Bank* was created as the first central bank of the Czech Republic. The new central bank law, the Act on the Czech National Bank of December 17, 1992 is very similar to its predecessor, Act 22/1992.

The Czech National Bank has a primary objective "to ensure the stability of the Czech national currency (the Crown). For this purpose the Czech National Bank shall [...] set monetary policy [...]"³⁶

"In providing for its primary objective the Czech National Bank shall be independent of any instructions given by the Government".³⁷ That is, it has a strong independent position. Concerning exchange rate policy, "The Czech National Bank shall [...] proclaim the exchange rate of the Czech currency vis-à-vis foreign currencies".³⁸ Thus it is also responsible for exchange rate management. In other words, it is responsible for the internal and external value of the Czech currency.

Co-operation between the bank and government is stipulated by law: a government representative is allowed to attend the meetings of the bank Board in an advisory capacity, and the bank gives the government advice in the monetary and banking field.

The bank is governed by the Board. "The Bank Board shall set monetary policy and the instruments for the implementation of these policies, and shall decide on the measures to be taken in the sphere of monetary policy".³⁹ The Board consists of the Governor, two Deputy Governors and four other senior officers of the bank. All members are appointed by the President of the Czech Republic for a period of six years. The central bank law clearly stipulates the motives for dismissal of the Board members, in order to protect the independent position of the bank.

The bank can give credit to the government to help bridge temporary budget deficits, but the total amount of credit may not exceed five per cent of the previous year's State revenues.

³⁶ Act on the Czech National Bank, 17 December 1992, art. 5.

³⁷ Ibidem, art. 9(1).

³⁸ Ibidem, art. 35.

³⁹ Ibidem, art. 2.

REFERENCES

- ALESINA, A. (1988), "Macroeconomics and politics", *NBER Macroeconomic Annual 1988*, Cambridge, pp. 13-52.
- ALESINA, A. (1989), "Politics and business cycles in industrial democracies", *Economic Policy*, no. 8, April, pp. 55-98.
- ALESINA, A. and SUMMERS, L. (1993), "Central bank independence and macroeconomic performance: some comparative evidence", *Journal of Money, Credit and Banking*, vol. 25, pp. 151-162.
- BADE, R. and PARKIN, M. (1988), "Central bank laws and monetary policy", *Department of Economics, University of Western Ontario, Canada*, October.
- CUKIERMAN, A. (1992), *Central Bank Strategy, Credibility and Independence: Theory and Evidence*, The MIT Press, Cambridge, Massachusetts.
- DE HAAN, J. and STURM, J.E. (1992), "The case for central bank independence", in *Banca Nazionale del Lavoro Quarterly Review*, no. 182, September, pp. 305-327.
- EIJFFINGER, S. and SCHALING, E. (1992), "Central bank independence: criteria and indices", *Department of Economics Research Memorandum*, Tilburg University, March, pp. 34-37.
- EIJFFINGER, S. and SCHALING, E. (1993), "Central bank independence in twelve industrial countries", in *Banca Nazionale del Lavoro Quarterly Review*, no. 184, March, pp. 64-68.
- EIJFFINGER, S. and SCHALING, E. (1995), "Central bank independence: theory and evidence", *European Journal of Political Economy*, forthcoming.
- GRILLI, V., MASCIANDARO, D. and TABELLINI, G. (1991), "Political and monetary institutions and public financial policies in industrial countries", *Economic Policy*, Fall, pp. 366-375.
- INTERNATIONAL MONETARY FUND (1993), *IMF International Financial Statistics Yearbook*, Washington, D.C.
- UNGERER, H. (1990), "The EMS, 1979-1990, policies-evolution-outlook", *Konjunkturpolitik*, Bd. 36, Heft 6, pp. 329-362.